

ASR9000 Software / Firmware & Hardware Compatibility Matrix								
Hardware Type	FPD Description	Sub-Type	IOS XR 6.0.1	IOS XR 6.0.2	IOS XR 6.2.3	IOS XR 6.3.1	IOS XR 6.4.1	
BPID								
ASR-9904-BPID2	Can Bus Ctrl (CBC) BP2	cbc	7.104	7.104	7.105	7.105	7.105	
ASR-9912-BPID2	Can Bus Ctrl (CBC) BP2	cbc	7.104	7.104	7.105	7.105	7.105	
ASR-9922-BPID2	Can Bus Ctrl (CBC) BP2	cbc	7.104	7.104	7.105	7.105	7.105	
A9K-BPID2-E-10-SLOT	Can Bus Ctrl (CBC) BP2	cbc	7.104	7.104	7.105	7.105	7.105	
A9K-BPID2-E-6-SLOT	Can Bus Ctrl (CBC) BP2	cbc	7.104	7.104	7.105	7.105	7.105	
A9K-BPID2-10-SLOT	Can Bus Ctrl (CBC) BP2	cbc	7.104	7.104	7.105	7.105	7.105	
A9K-BPID2-6-SLOT	Can Bus Ctrl (CBC) BP2	cbc	7.104	7.104	7.105	7.105	7.105	
ASR-9910-BPID2	Can Bus Ctrl (CBC) BP2	cbc	7.104	7.104	7.105	7.105	7.105	
Fan Trays								
ASR-9010-FAN	Can Bus Ctrl (CBC) FAN	cbc	4.03	4.03	4.03	4.03	4.03	
ASR-9006-FAN	Can Bus Ctrl (CBC) FAN	cbc	5.04	5.04	5.04	5.04	5.04	
ASR-9922-FAN	Can Bus Ctrl (CBC) MFAN	cbc	29.12	29.12	29.12	29.12	29.12	
ASR-9912-FAN	Can Bus Ctrl (CBC) SFAN	cbc	31.05	31.05	31.05	31.05	31.05	
ASR-9010-FAN-V2	Can Bus Ctrl (CBC) FAN	cbc	29.12	29.12	29.12	29.12	29.12	
ASR-9904-FAN	Can Bus Ctrl (CBC) SFAN	cbc	31.05	31.05	31.05	31.05	31.05	
ASR-9922-FAN-V2	Can Bus Ctrl (CBC) MFAN	cbc	40.07	40.07	40.07	40.07	40.07	
	fpga9	fpga9	2.04	2.04	2.06	2.06	2.06	
ASR-9001-FAN	Can Bus Ctrl (CBC) FAN	cbc	24.115	24.115	24.115	24.115	24.115	
ASR-9001-FAN-V2	Can Bus Ctrl (CBC) FAN	cbc	24.115	24.115	24.115	24.115	24.115	
ASR-9910-FAN	Can Bus Ctrl (CBC) SHFAN	cbc	45.020	45.020	45.020	45.020	45.020	
	Fan Controller SHFAN	fpga9	2.060	2.060	2.060	2.060	2.060	
ASR-9006-FAN-V2	Can Bus Ctrl (CBC) FAN	cbc	5.040	5.040	5.040	5.040	5.040	
Power Supply Module								
PWR-3KW-AC-V2	Delta AC logic PM	fpga11	6.04	6.04	6.04	6.04	6.04	
	Delta AC primary PM	fpga12	6.02	6.02	6.02	6.02	6.02	
	Delta AC secondary PM	fpga13	6.02	6.02	6.02	6.02	6.02	
	Emerson AC logic PM	fpga14	3.18	3.18	3.18	3.18	3.18	
	Emerson AC primary PM	fpga15	3.06	3.06	3.06	3.06	3.06	
	Emerson AC secondary PM	fpga16	3.12	3.12	3.12	3.12	3.12	
PWR-2KW-DC-V2	Delta DC logic PM	fpga11	6.03	6.03	6.03	6.03	6.03	
	Delta DC primary PM	fpga12	6.03	6.03	6.03	6.03	6.03	
	Delta DC secondary PM	fpga13	6.02	6.02	6.02	6.02	6.02	
	Emerson DC logic PM	fpga14	3.19	3.19	3.19	3.19	3.19	
	Emerson DC primary PM	fpga15	3.12	3.12	3.12	3.12	3.12	
	Emerson DC secondary PM	fpga16	3.19	3.19	3.19	3.19	3.19	
PWR-6KW-AC-V3	Delta V3 AC logic PM	fpga11	4.01	4.01	4.04	4.04	4.04	
	Delta V3 AC primary PM	fpga12	4.00	4.00	4.02	4.02	4.02	
	Delta V3 AC secondary PM	fpga13	4.01	4.01	4.03	4.03	4.03	
	Acbel V3 AC logic PM	fpga14	1.00	1.00	1.00	1.00	2.05	
	Acbel V3 AC primary PM	fpga15	1.00	1.00	1.00	1.00	1.25	
	Acbel V3 AC secondary PM	fpga16	1.00	1.00	1.00	1.00	2.29	
PWR-4.4KW-DC-V3	Delta V3 DC logic PM	fpga11	3.00	3.00	3.00	3.00	3.00	
	Delta V3 DC primary PM	fpga12	3.00	3.00	3.00	3.00	3.00	
	Delta V3 DC secondary PM	fpga13	3.00	3.00	3.00	3.00	3.00	
	Acbel V3 DC logic PM	fpga14	1.00	1.00	1.00	1.00	1.11	
	Acbel V3 DC primary PM	fpga15	1.00	1.00	1.00	1.00	1.03	
	Acbel V3 DC secondary PM	fpga16	1.00	1.00	1.00	1.00	2.13	
PWR-3KW-HVDC	Delta HVDC logic PM	fpga11	2.03	2.03	2.03	2.03	2.03	
	Delta HVDC primary PM	fpga12	2.02	2.02	2.02	2.02	2.02	
	Delta HVDC secondary PM	fpga13	2.02	2.02	2.02	2.02	2.02	
A9K-1600W-AC	PO-PrIMCU(A)							17.14
A9K-1600W-DC	PO-PrIMCU(A)							1.08
Fabric Cards								
ASR-9922-SFC110	Can Bus Ctrl (CBC) MTFC	cbc	28.06	28.06	28.06	28.06	28.06	
	Fabric Ctrl0 MTFC	fpga7	1.03	1.03	1.03	1.03	1.03	
ASR-9912-SFC110	Can Bus Ctrl (CBC) SSFC	cbc	32.05	32.05	32.05	32.05	32.05	
	Fabric Ctrl0 MTFC	fpga7	1.03	1.03	1.03	1.03	1.03	
A99-SFC2	Can Bus Ctrl (CBC) MTFC	cbc	37.2	37.2	37.2	37.2	37.2	
	Fabric Ctrl0 MTFC	fclnxfw	1.79	1.79	1.1	1.1	1.1	
	Fabric Ctrl0 MTFC	fclpaga8	0.33	0.33	0.37	0.37	0.37	
	Fabric Ctrl0 MTFC	fclsb1	1.79	1.79	1.1	1.1	1.1	
ASR-9912-SFC220	Can Bus Ctrl (CBC) MTFC	cbc	37.2	37.2	37.2	37.2	37.2	
	Fabric Ctrl0 MTFC	fclnxfw	1.79	1.79	1.1	1.1	1.1	
	Fabric Ctrl0 MTFC	fclpaga8	0.33	0.33	0.37	0.37	0.37	
	Fabric Ctrl0 MTFC	fclsb1	1.79	1.79	1.1	1.1	1.1	
A99-SFC-S	Can Bus Ctrl (CBC) SHFC	cbc	44.02	44.02	44.02	44.02	44.02	
	Fabric Ctrl0 SHFC	fclsb1	1.8	1.8	1.1	1.1	1.1	
	Fabric Ctrl0 SHFC	fclnxfw	1.8	1.8	1.1	1.1	1.1	
	Fabric Ctrl0 SHFC	fpga8	0.32	0.32	0.37	0.37	0.37	
RSPs								
A9K-RSP440-TR	Can Bus Ctrl (CBC) RSP3	cbc	16.116	16.116	16.116	16.116	16.116	
	CPUCtrl0 RSP3	fpga2	1.09	1.09	1.1	1.1	1.1	
	UTI RSP3	fpga3	4.09	4.09	4.09	4.09	4.09	
	ClkCtrl RSP3	fpga1	0.11	0.11	0.11	0.11	0.11	
	ROMMONB RSP3	rommon	0.75	0.75	0.76	0.76	0.76	
A9K-RSP440-SE	Can Bus Ctrl (CBC) RSP3	cbc	16.116	16.116	16.116	16.116	16.116	
	CPUCtrl0 RSP3	fpga2	1.09	1.09	1.1	1.1	1.1	
	UTI RSP3	fpga3	4.09	4.09	4.09	4.09	4.09	
	ClkCtrl RSP3	fpga1	0.11	0.11	0.11	0.11	0.11	
	ROMMONB RSP3	rommon	0.75	0.75	0.76	0.76	0.76	
ASR9001-RP	ROMMONB IM RP	rommon	22.114	22.114	3.04	3.04	3.04	
	Can Bus Ctrl (CBC) IMRP	cbc	1.15	1.15	22.114	22.114	22.114	
	MB CPUCtrl	fpga2	2.04	2.04	1.15	1.15	1.15	
ASR-9922-RP-TR	Can Bus Ctrl (CBC) MTRP	cbc	25.03	25.03	25.03	25.03	25.03	
	Fabric Ctrl3 MTFC	fpga10	1.03	1.03	1.03	1.03	1.03	
	Fabric Ctrl4 MTFC	fpga11	1.03	1.03	1.03	1.03	1.03	
	Fabric Ctrl5 MTFC	fpga12	1.03	1.03	1.03	1.03	1.03	
	Fabric Ctrl6 MTFC	fpga13	1.03	1.03	1.03	1.03	1.03	
	CPUCtrl1	fpga2	1.03	1.03	1.03	1.03	1.03	
	ClkCtrl	fpga3	1.05	1.05	1.05	1.05	1.05	
	IntCtrl	fpga4	1.04	1.04	1.04	1.04	1.04	
	UTI	fpga5	4.09	4.09	4.09	4.09	4.09	
	Timex	fpga6	0.02	0.02	0.02	0.02	0.02	
	Fabric Ctrl0 MTFC	fpga7	1.03	1.03	1.03	1.03	1.03	
	Fabric Ctrl1 MTFC	fpga8	1.03	1.03	1.03	1.03	1.03	
	Fabric Ctrl2 MTFC	fpga9	1.03	1.03	1.03	1.03	1.03	
	CPUCtrl0	fpga1	1.05	1.05	1.05	1.05	1.05	
	ROMMONB MTRP	rommon	5.15	5.15	5.16	5.16	5.16	
	Can Bus Ctrl (CBC) MTRP	cbc	25.03	25.03	25.03	25.03	25.03	

	Fabric Ctrl3 MIFC	fpga10	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl4 MIFC	fpga11	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl5 MIFC	fpga12	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl6 MIFC	fpga13	1.03	1.03	1.03	1.03	1.03
	CPUCtrl1	fpga2	1.03	1.03	1.03	1.03	1.03
	ClkCtrl	fpga3	1.05	1.05	1.05	1.05	1.05
	IntCtrl	fpga4	1.04	1.04	1.04	1.04	1.04
	UTL	fpga5	4.09	4.09	4.09	4.09	4.09
	Timex	fpga6	0.02	0.02	0.02	0.02	0.02
	Fabric Ctrl0 MIFC	fpga7	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl1 MIFC	fpga8	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl2 MIFC	fpga9	1.03	1.03	1.03	1.03	1.03
	CPUCtrl0	fpga1	1.05	1.05	1.05	1.05	1.05
	ROMMONB MTRP	rommon	5.15	5.15	5.16	5.16	5.16
ASR-9900-RP-TR	Can Bus Ctrl (CBC) MTRP	cbc	25.03	25.03	25.03	25.03	25.03
	Fabric Ctrl3 MIFC	fpga10	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl4 MIFC	fpga11	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl5 MIFC	fpga12	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl6 MIFC	fpga13	1.03	1.03	1.03	1.03	1.03
	CPUCtrl1	fpga2	1.03	1.03	1.03	1.03	1.03
	ClkCtrl	fpga3	1.05	1.05	1.05	1.05	1.05
	IntCtrl	fpga4	1.04	1.04	1.04	1.04	1.04
	UTL	fpga5	4.09	4.09	4.09	4.09	4.09
	Timex	fpga6	0.02	0.02	0.02	0.02	0.02
	Fabric Ctrl0 MIFC	fpga7	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl1 MIFC	fpga8	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl2 MIFC	fpga9	1.03	1.03	1.03	1.03	1.03
	CPUCtrl0	fpga1	1.05	1.05	1.05	1.05	1.05
	ROMMONB MTRP	rommon	5.15	5.15	5.16	5.16	5.16
ASR-9900-RP-SE	Can Bus Ctrl (CBC) MTRP	cbc	25.03	25.03	25.03	25.03	25.03
	Fabric Ctrl3 MIFC	fpga10	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl4 MIFC	fpga11	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl5 MIFC	fpga12	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl6 MIFC	fpga13	1.03	1.03	1.03	1.03	1.03
	CPUCtrl1	fpga2	1.03	1.03	1.03	1.03	1.03
	ClkCtrl	fpga3	1.05	1.05	1.05	1.05	1.05
	IntCtrl	fpga4	1.04	1.04	1.04	1.04	1.04
	UTL	fpga5	4.09	4.09	4.09	4.09	4.09
	Timex	fpga6	0.02	0.02	0.02	0.02	0.02
	Fabric Ctrl0 MIFC	fpga7	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl1 MIFC	fpga8	1.03	1.03	1.03	1.03	1.03
	Fabric Ctrl2 MIFC	fpga9	1.03	1.03	1.03	1.03	1.03
	CPUCtrl0	fpga1	1.05	1.05	1.05	1.05	1.05
	ROMMONB MTRP	rommon	5.15	5.15	5.16	5.16	5.16
A9K-RSP880-TR	Can Bus Ctrl (CBC) RSP4	cbc	34.38	34.38	34.38	34.38	34.38
	fsbl RSP4	fsbl	1.80	1.80	1.103	1.103	1.103
	MB CPUCtrl	fpga2	0.42	0.42	0.57	0.57	0.57
	Inxfw RSP4	inxfw	1.80	1.80	1.103	1.103	1.103
	BrdCtrl RSP4	fpga3	0.14	0.14	0.16	0.16	0.16
	UTL RSP4	fpga4	0.11	0.11	0.16	0.16	0.16
	LcCtrl RSP4	fpga5	0.12	0.12	0.12	0.12	0.12
	DataPath RSP4	fpga6	0.05	0.05	0.06	0.06	0.06
	ROMMONB RSP4	rommon	10.47	10.50	10.59	10.59	10.59
A9K-RSP880-SE	Can Bus Ctrl (CBC) RSP4	cbc	34.38	34.38	34.38	34.38	34.38
	fsbl RSP4	fsbl	1.80	1.80	1.103	1.103	1.103
	IPU RSP4	fpga2	0.42	0.42	0.57	0.57	0.57
	Inxfw RSP4	inxfw	1.80	1.80	1.103	1.103	1.103
	BrdCtrl RSP4	fpga3	0.14	0.14	0.16	0.16	0.16
	UTL RSP4	fpga4	0.11	0.11	0.16	0.16	0.16
	LcCtrl RSP4	fpga5	0.12	0.12	0.12	0.12	0.12
	DataPath RSP4	fpga6	0.05	0.05	0.06	0.06	0.06
	ROMMONB RSP4	rommon	10.47	10.50	10.59	10.59	10.59
A99-RP2-TR	Can Bus Ctrl (CBC) RP2	cbc	35.12	35.12	35.12	35.12	35.12
	fsbl RP2	fsbl	1.80	1.80	1.103	1.103	1.103
	IPU RP2	fpga2	0.42	0.42	0.57	0.57	0.57
	Inxfw RP2	inxfw	1.80	1.80	1.103	1.103	1.103
	BrdCtrl RP2	fpga3	0.14	0.14	0.16	0.16	0.16
	UTL RP2	fpga4	0.11	0.11	0.16	0.16	0.16
	LcCtrl RP2	fpga5	0.12	0.12	0.12	0.12	0.12
	DataPath RP2	fpga6	0.05	0.05	0.06	0.06	0.06
	ROMMONB RP2	rommon	14.17	14.20	14.29	14.29	14.29
A99-RP2-SE	Can Bus Ctrl (CBC) RP2	cbc	35.12	35.12	35.12	35.12	35.12
	fsbl RP2	fsbl	1.80	1.80	1.103	1.103	1.103
	IPU RP2	fpga2	0.42	0.42	0.57	0.57	0.57
	Inxfw RP2	inxfw	1.80	1.80	1.103	1.103	1.103
	BrdCtrl RP2	fpga3	0.14	0.14	0.16	0.16	0.16
	UTL RP2	fpga4	0.11	0.11	0.16	0.16	0.16
	LcCtrl RP2	fpga5	0.12	0.12	0.12	0.12	0.12
	DataPath RP2	fpga6	0.05	0.05	0.06	0.06	0.06
	ROMMONB RP2	rommon	14.17	14.20	14.29	14.29	14.29
A9K-RSP440-LT	Can Bus Ctrl (CBC) RSP3	cbc	16.116	16.116	16.116	16.116	16.116
	ClockCtrl RSP3	fpga2	1.11	1.11	1.11	1.11	1.11
	UTL RSP3	fpga3	4.09	4.09	4.09	4.09	4.09
	CPUCtrl RSP3	fpga1	0.11	0.11	0.11	0.11	0.11
	ROMMONB RSP3	rommon	0.75	0.75	0.76	0.76	0.76
A99-RSP-TR	Can Bus Ctrl (CBC) RSP4S	cbc	43.02	43.02	43.02	43.02	43.02
	MB CPUCtrl	fpga2	0.40	0.40	0.57	0.57	0.57
	DBCtrl	fpga3	0.13	0.13	0.16	0.16	0.16
	DBCtrl	fpga4	0.11	0.11	0.16	0.16	0.16
	DBCtrl	fpga5	0.11	0.11	0.12	0.12	0.12
	PUNT FPGA	fpga6	0.04	0.04	0.06	0.06	0.06
	Fsbl	fsbl	1.81	1.81	1.103	1.103	1.103
	LinuxFW	inxfw	1.81	1.81	1.103	1.103	1.103
	ROMMONB RSP4SHW	rommon	16.03	16.03	16.08	16.08	16.08
A99-RSP-SE	Can Bus Ctrl (CBC) RSP4S	cbc	43.02	43.02	43.02	43.02	43.02
	MB CPUCtrl	fpga2	0.40	0.40	0.57	0.57	0.57
	DBCtrl	fpga3	0.13	0.13	0.16	0.16	0.16
	DBCtrl	fpga4	0.11	0.11	0.16	0.16	0.16
	DBCtrl	fpga5	0.11	0.11	0.12	0.12	0.12
	PUNT FPGA	fpga6	0.04	0.04	0.06	0.06	0.06
	Fsbl	fsbl	1.81	1.81	1.103	1.103	1.103
	LinuxFW	inxfw	1.81	1.81	1.103	1.103	1.103
	ROMMONB RSP4SHW	rommon	16.03	16.03	16.08	16.08	16.08
A9K-RSP880-LT-TR	Can Bus Ctrl (CBC) RSP4L	cbc					50.01
	fsbl	fsbl					1.104
	MB CPUCtrl	fpga2					0.14
	Inxfw RSP4L	inxfw					1.104
	BrdCtrl RSP4L	fpga3					0.05
	UTL RSP4L	fpga4					0.04
	LcCtrl RSP4L	fpga5					0.04
	DataPath RSP4L	fpga6					1.11
	ROMMONB RSP4L	rommon					17.3
A9K-RSP880-LT-SE	Can Bus Ctrl (CBC) RSP4L	cbc					50.01
	fsbl	fsbl					1.104
	MB CPUCtrl	fpga2					0.14
	Inxfw RSP4L	inxfw					1.104
	BrdCtrl RSP4L	fpga3					0.05

	UTI RSP4L	fpga4					0.04
	LcCtrl RSP4L	fpga5					0.04
	DataPath RSP4L	fpga6					1.11
	ROMMONB RSP4L	rommon					17.3
ASR-9901-RP	Can Bus Ctrl (CBC) A	cbc					54.08
	Drax-FPGA(A)						0.27
	IPU-FPGA(A)						2
	IPU-FSBL(A)						1.104
	IPU-Linux(A)						1.104
	Primary-BIOS(A)						22.15
Line Cards							
A9K-24x10GE-SE	Can Bus Ctrl (CBC) LC6	cbc	19.112	19.112	19.112	19.112	19.112
	DBCtrI LC6	fpga2	1.03	1.03	1.03	1.03	1.03
	LinkCtrl LC6	fpga3	1.01	1.01	1.01	1.01	1.01
	LCCPUctrl LC6	fpga4	1.07	1.07	1.07	1.07	1.07
	ROMMONB LC6	rommon	3.03	3.03	3.03	3.03	3.03
A9K-24x10GE-TR	Can Bus Ctrl (CBC) LC6	cbc	19.112	19.112	19.112	19.112	19.112
	DBCtrI LC6	fpga2	1.03	1.03	1.03	1.03	1.03
	LinkCtrl LC6	fpga3	1.01	1.01	1.01	1.01	1.01
	LCCPUctrl LC6	fpga4	1.07	1.07	1.07	1.07	1.07
	ROMMONB LC6	rommon	3.03	3.03	3.03	3.03	3.03
ASR9001-LC	Can Bus Ctrl (CBC) IMLC	cbc	23.114	23.114	23.114	1.01	23.114
	DB CPUCtrl	fpga2	1.18	1.18	1.18	1.03	1.18
	EP Gambit	fpga3	1.00	1.00	1.01	3.03	1.01
	MB CPUCtrl	fpga4	2.10	2.10	2.1	20.118	2.1
	EP Rogue	fpga6	1.06	1.06	1.06	1.04	1.06
	EP Sage	fpga7	1.02	1.02	1.02	1.05	1.02
	ROMMONB IM LC	rommon	2.04	2.04	3.04	3.03	3.04
ASR9001-LC-S	Can Bus Ctrl (CBC) IMLC	cbc	23.114	23.114	23.114	23.114	23.114
	DB CPUCtrl	fpga2	1.18	1.18	1.18	1.18	1.18
	EP Gambit	fpga3	1.00	1.00	1.01	1.01	1.01
	MB CPUCtrl	fpga4	2.10	2.10	2.1	2.1	2.1
	EP Rogue	fpga6	1.06	1.06	1.06	1.06	1.06
	EP Sage	fpga7	1.02	1.02	1.02	1.02	1.02
	ROMMONB IM LC	rommon	2.04	2.04	3.04	3.04	3.04
A9K-36x10GE-SE	Can Bus Ctrl (CBC) LC6	cbc	15.104	15.104	15.104	15.104	15.104
	DBCtrI LC6	fpga2	1.01	1.01	1.01	1.01	1.01
	LinkCtrl LC6	fpga3	1.00	1.00	1	1	1
	LCCPUctrl LC6	fpga4	1.03	1.03	1.03	1.03	1.03
	ROMMONB LC6	rommon	3.03	3.03	3.03	3.03	3.03
A9K-36x10GE-TR	Can Bus Ctrl (CBC) LC6	cbc	15.104	15.104	15.104	15.104	15.104
	DBCtrI LC6	fpga2	1.01	1.01	1.01	1.01	1.01
	LinkCtrl LC6	fpga3	1.00	1.00	1	1	1
	LCCPUctrl LC6	fpga4	1.03	1.03	1.03	1.03	1.03
	ROMMONB LC6	rommon	3.03	3.03	3.03	3.03	3.03
A9K-36x10GE_SC7-SE	Can Bus Ctrl (CBC) LC6	cbc	15.104	15.104	15.104	15.104	15.104
	DBCtrI LC6	fpga2	1.01	1.01	1.01	1.01	1.01
	LinkCtrl LC6	fpga3	1.00	1.00	1	1	1
	LCCPUctrl LC6	fpga4	1.03	1.03	1.03	1.03	1.03
	ROMMONB LC6	rommon	3.03	3.03	3.03	3.03	3.03
A9K-36x10GE_SC7-TR	Can Bus Ctrl (CBC) LC6	cbc	15.104	15.104	15.104	15.104	15.104
	DBCtrI LC6	fpga2	1.01	1.01	1.01	1.01	1.01
	LinkCtrl LC6	fpga3	1.00	1.00	1	1	1
	LCCPUctrl LC6	fpga4	1.03	1.03	1.03	1.03	1.03
	ROMMONB LC6	rommon	3.03	3.03	3.03	3.03	3.03
A9K-MOD80-SE	Can Bus Ctrl (CBC) LC4	cbc	20.118	20.118	20.118	20.118	20.118
	DB Ctrl	fpga2	1.04	1.04	1.04	1.04	1.04
	MB CPUCtrl	fpga4	1.05	1.05	1.05	1.05	1.05
	ROMMONB LC4	rommon	3.03	3.03	3.03	3.03	3.03
A9K-MOD80-TR	Can Bus Ctrl (CBC) LC4	cbc	20.118	20.118	20.118	20.118	20.118
	DB Ctrl	fpga2	1.04	1.04	1.04	1.04	1.04
	MB CPUCtrl	fpga4	1.05	1.05	1.05	1.05	1.05
	ROMMONB LC4	rommon	3.03	3.03	3.03	3.03	3.03
A9K-MOD160-SE	Can Bus Ctrl (CBC) LC4	cbc	20.118	20.118	20.118	20.118	20.118
	DB Ctrl	fpga2	1.04	1.04	1.04	1.04	1.04
	MB CPUCtrl	fpga4	1.05	1.05	1.05	1.05	1.05
	ROMMONB LC4	rommon	3.03	3.03	3.03	3.03	3.03
A9K-MOD160-TR	Can Bus Ctrl (CBC) LC4	cbc	20.118	20.118	20.118	20.118	20.118
	DB Ctrl	fpga2	1.04	1.04	1.04	1.04	1.04
	MB CPUCtrl	fpga4	1.05	1.05	1.05	1.05	1.05
	ROMMONB LC4	rommon	3.03	3.03	3.03	3.03	3.03
A9K-2x100GE-SE	Can Bus Ctrl (CBC) LC4	cbc	21.111	21.111	21.111	21.111	21.111
	DB IO FPGA1	cp1d1	1.03	1.03	1.03	1.03	1.03
	MB CPUCtrl	fpga2	1.08	1.08	1.08	1.08	1.08
	PortCtrl	fpga3	1.05	1.05	1.05	1.05	1.05
	Imux	fpga4	1.01	1.04	1.04	1.04	1.04
	Emux	fpga5	1.03	1.04	1.04	1.04	1.04
	100GIGMAC	fpga6	39.00	41.00	41	41	41
	ROMMONB LC4	rommon	3.03	3.03	3.03	3.03	3.03
A9K-2x100GE-TR	Can Bus Ctrl (CBC) LC4	cbc	21.111	21.111	21.111	21.111	21.111
	DB IO FPGA1	cp1d1	1.03	1.03	1.03	1.03	1.03
	MB CPUCtrl	fpga2	1.08	1.08	1.08	1.08	1.08
	PortCtrl	fpga3	1.05	1.05	1.05	1.05	1.05
	Imux	fpga4	1.01	1.04	1.04	1.04	1.04
	Emux	fpga5	1.03	1.04	1.04	1.04	1.04
	100GIGMAC	fpga6	39.00	41.00	41	41	41
	ROMMONB LC4	rommon	3.03	3.03	3.03	3.03	3.03
A9K-1x100GE-SE	Can Bus Ctrl (CBC) LC4	cbc	21.111	21.111	21.111	21.111	21.111
	DB IO FPGA1	cp1d1	1.03	1.03	1.03	1.03	1.03
	MB CPUCtrl	fpga2	1.08	1.08	1.08	1.08	1.08
	PortCtrl	fpga3	1.05	1.05	1.05	1.05	1.05
	Imux	fpga4	1.01	1.04	1.04	1.04	1.04
	Emux	fpga5	1.03	1.04	1.04	1.04	1.04
	100GIGMAC	fpga6	39.00	41.00	41	41	41
	ROMMONB LC4	rommon	3.03	3.03	3.03	3.03	3.03
A9K-1x100GE-TR	Can Bus Ctrl (CBC) LC4	cbc	21.111	21.111	21.111	21.111	21.111
	DB IO FPGA1	cp1d1	1.03	1.03	1.03	1.03	1.03
	MB CPUCtrl	fpga2	1.08	1.08	1.08	1.08	1.08
	PortCtrl	fpga3	1.05	1.05	1.05	1.05	1.05
	Imux	fpga4	1.01	1.04	1.04	1.04	1.04
	Emux	fpga5	1.03	1.04	1.04	1.04	1.04
	100GIGMAC	fpga6	39.00	41.00	41	41	41
	ROMMONB LC4	rommon	3.03	3.03	3.03	3.03	3.03
A9K-VSM-500	Can Bus Ctrl (CBC)	cbc	33.05	33.05	33.05	33.05	33.05
	DB IO FPGA	fpga1	1.26	1.26	1.26	1.26	1.26
	BIOS	rommon	3.07	3.07	3.07	3.07	3.07
	BMC	ibmc	5.08	5.08	5.08	5.08	5.08
A9K-8X100GE-L-SE	Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23

		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.96
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.96
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.93
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A9K-8X100GE-L-TR		Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23
		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.96
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.96
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.93
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A9K-8X100GE-SE		Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23
		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.96
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.96
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.93
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A9K-8X100GE-TR		Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23
		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.96
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.96
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.93
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A99-8X100GE-TR		Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23
		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.103
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.103
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.97
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A99-8X100GE-SE		Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23
		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.103
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.103
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.97
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A9K-4X100GE-SE		Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23
		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.103
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.103
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.97
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A9K-4X100GE-TR		Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23
		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.103
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.103
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.97
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A99-4X100GE-TR		Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23
		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.103
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.103
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.97
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A99-4X100GE-SE		Can Bus Ctrl (CBC) LC2	cbc	38.23	38.23	38.23	38.23	38.23
		fsbl LC2	fsbl	1.78	1.78	1.96	1.96	1.103
		Infsw LC2	Infsw	1.78	1.78	1.96	1.96	1.103
		IPU LC2	fgpa2	1.76	1.76	1.93	1.93	1.97
		Meldan LC2	fgpa3	1.04	1.04	1.07	1.07	1.07
		Dalla LC2	fgpa4	1.06	1.06	1.09	1.09	1.09
		ROMMONB LC2	rommon	8.37	8.40	8.43	8.43	8.43
		CPAK LR4	fgpa5			1.16	1.16	1.16
		CPAK SR10	fgpa6			2.02	2.02	2.02
A9K-MOD200-SE		Can Bus Ctrl (CBC) LC2	cbc	39.05	39.05	39.07	39.07	39.08
		MB.CPUCtrl	fgaa2	1.76	1.76	1.93	1.93	1.97
		DBCtrl	fgaa10	1.17	1.17	1.19	1.19	1.25
		FSBL	fsbl	1.78	1.78	1.96	1.96	1.103
		LinuxFW	Infsw	1.78	1.78	1.96	1.96	1.103
		ROMMON LC1	rommon	8.37	8.4	8.43	8.43	8.43
A99-MOD200-SE		Can Bus Ctrl (CBC) LC2	cbc	39.05	39.05	39.07	39.07	39.08
		MB.CPUCtrl	fgaa2	1.76	1.76	1.93	1.93	1.97
		DBCtrl	fgaa10	1.17	1.17	1.19	1.19	1.25
		FSBL	fsbl	1.78	1.78	1.96	1.96	1.103
		LinuxFW	Infsw	1.78	1.78	1.96	1.96	1.103
		ROMMON LC1	rommon	8.37	8.4	8.43	8.43	8.43
A99-MOD200-TR		Can Bus Ctrl (CBC) LC2	cbc	39.05	39.05	39.07	39.07	39.08
		MB.CPUCtrl	fgaa2	1.76	1.76	1.93	1.93	1.97
		DBCtrl	fgaa10	1.17	1.17	1.19	1.19	1.25
		FSBL	fsbl	1.78	1.78	1.96	1.96	1.103
		LinuxFW	Infsw	1.78	1.78	1.96	1.96	1.103
		ROMMON LC1	rommon	8.37	8.4	8.43	8.43	8.43
A9K-MOD200-TR		Can Bus Ctrl (CBC) LC2	cbc	39.05	39.05	39.07	39.07	39.08
		MB.CPUCtrl	fgaa2	1.76	1.76	1.93	1.93	1.97
		DBCtrl	fgaa10	1.17	1.17	1.19	1.19	1.25
		FSBL	fsbl	1.78	1.78	1.96	1.96	1.103
		LinuxFW	Infsw	1.78	1.78	1.96	1.96	1.103
		ROMMON LC1	rommon	8.37	8.4	8.43	8.43	8.43
A9K-MOD400-SE		Can Bus Ctrl (CBC) LC2	cbc	39.05	39.05	39.07	39.07	39.08
		MB.CPUCtrl	fgaa2	1.76	1.76	1.93	1.93	1.97

	DBCtrI	fpga10	1.17	1.17	1.19	1.19	1.25
	FSBL	fsbl	1.78	1.78	1.96	1.96	1.103
	LinuxFW	lnxfw	1.78	1.78	1.96	1.96	1.103
	ROMMON LC1	rommon	8.37	8.4	8.43	8.43	8.43
A99-MOD400-SE	Can Bus Ctrl (CBC) LC2	cbc	39.05	39.05	39.07	39.07	39.08
	MB CPUCtrl	fpga2	1.76	1.76	1.93	1.93	1.97
	DBCtrI	fpga10	1.17	1.17	1.19	1.19	1.25
	FSBL	fsbl	1.78	1.78	1.96	1.96	1.103
	LinuxFW	lnxfw	1.78	1.78	1.96	1.96	1.103
	ROMMON LC1	rommon	8.37	8.4	8.43	8.43	8.43
A99-MOD400-TR	Can Bus Ctrl (CBC) LC2	cbc	39.05	39.05	39.07	39.07	39.08
	MB CPUCtrl	fpga2	1.76	1.76	1.93	1.93	1.97
	DBCtrI	fpga10	1.17	1.17	1.19	1.19	1.25
	FSBL	fsbl	1.78	1.78	1.96	1.96	1.103
	LinuxFW	lnxfw	1.78	1.78	1.96	1.96	1.103
	ROMMON LC1	rommon	8.37	8.4	8.43	8.43	8.43
A9K-MOD400-TR	Can Bus Ctrl (CBC) LC2	cbc	39.05	39.05	39.07	39.07	39.08
	MB CPUCtrl	fpga2	1.76	1.76	1.93	1.93	1.97
	DBCtrI	fpga10	1.17	1.17	1.19	1.19	1.25
	FSBL	fsbl	1.78	1.78	1.96	1.96	1.103
	LinuxFW	lnxfw	1.78	1.78	1.96	1.96	1.103
	ROMMON LC1	rommon	8.37	8.4	8.43	8.43	8.43
A9K-400G-DWDM-TR	Can Bus Ctrl (CBC) LC4	cbc	42.02	42.02	42.04	42.04	42.04
	MB CPUCtrl	fpga2	1.77	1.77	1.93	1.93	1.93
	DBCtrI	fpga3	1.04	1.04	1.06	1.06	1.06
	DBCtrI	fpga4	1.01	1.01	1.03	1.03	1.03
	DBCtrI	fpga5	1.01	1.01	1.05	1.05	1.05
	DBCtrI	fpga6	3.54	3.54	3.72	3.72	3.72
	DBCtrI	fpga7	49	49	49	49	49
	CFP2 V2	fpga8	4.38	4.38	5.23	5.23	5.23
	CFP2 V1	fpga8	4.38	4.38	1.93	1.93	4.4
	FSBL	fsbl	1.78	1.78	1.98	1.98	1.103
	LinuxFW	lnxfw	1.78	1.78	1.98	1.98	1.103
	ROMMONB LC1	rommon	8.37	8.4	8.43	8.43	8.43
A9K-8X100GE-CM	Can Bus Ctrl (CBC) LC4	cbc	38.23	38.23	38.23	38.23	38.23
	MB CPUCtrl	fpga2	1.76	1.76	1.93	1.93	1.97
	DBCtrI	fpga3	1.04	1.04	1.07	1.07	1.07
	PortCtrl	fpga4	1.06	1.06	1.09	1.09	1.09
	CPAK LR4	fpga5	1.16	1.16	1.16	1.16	1.16
	CPAK SR10	fpga6	2.02	2.02	2.02	2.02	2.02
	Fsbl	fsbl	1.78	1.78	1.96	1.96	1.103
	LinuxFW	lnxfw	1.78	1.78	1.96	1.96	1.103
	ROMMONB LC1	rommon	8.37	8.40	8.43	8.43	8.43
A99-8X100GE-CM	Can Bus Ctrl (CBC) LC4	cbc					46.06
	MB CPUCtrl	fpga2					1.85
	DBCtrI	fpga3					1.02
	PortCtrl	fpga4					1.02
	Fsbl	fsbl					1.10
	LinuxFW	lnxfw					1.10
	ROMMONB LC1	rommon					9.23
A99-8X100GE-SE	Can Bus Ctrl (CBC) LC4	cbc	38.23	38.23	38.23	38.23	38.23
	MB CPUCtrl	fpga2	1.76	1.76	1.93	1.93	1.97
	DBCtrI	fpga3	1.04	1.04	1.07	1.07	1.07
	PortCtrl	fpga4	1.06	1.06	1.09	1.09	1.09
	CPAK LR4	fpga5	1.16	1.16	1.16	1.16	1.16
	CPAK SR10	fpga6	2.02	2.02	2.02	2.02	2.02
	Fsbl	fsbl	1.78	1.78	1.96	1.96	1.103
	LinuxFW	lnxfw	1.78	1.78	1.96	1.96	1.103
	ROMMONB LC1	rommon	8.37	8.40	8.43	8.43	8.43
A99-8X100GE-TR	Can Bus Ctrl (CBC) LC4	cbc	38.23	38.23	38.23	38.23	38.23
	MB CPUCtrl	fpga2	1.76	1.76	1.93	1.93	1.97
	DBCtrI	fpga3	1.04	1.04	1.07	1.07	1.07
	PortCtrl	fpga4	1.06	1.06	1.09	1.09	1.09
	CPAK LR4	fpga5	1.16	1.16	1.16	1.16	1.16
	CPAK SR10	fpga6	2.02	2.02	2.02	2.02	2.02
	Fsbl	fsbl	1.78	1.78	1.96	1.96	1.103
	LinuxFW	lnxfw	1.78	1.78	1.96	1.96	1.103
	ROMMONB LC1	rommon	8.37	8.40	8.43	8.43	8.43
A99-12X100GE	Can Bus Ctrl (CBC) LC4	cbc	46.03	46.06	46.06	46.06	46.06
	MB CPUCtrl	fpga2	1.76	1.76	1.8	1.8	1.85
	DBCtrI	fpga3	1.02	1.02	1.02	1.02	1.02
	PortCtrl	fpga4	1.01	1.02	1.02	1.02	1.02
	Fsbl	fsbl	1.81	1.81	1.92	1.92	1.1
	LinuxFW	lnxfw	1.81	1.81	1.92	1.92	1.1
	ROMMONB LC1	rommon	9.18	9.20	9.21	9.21	9.23
A9K-48X10GE-1G-SE	Can Bus Ctrl (CBC) LC4	cbc			47.02	47.02	47.03
	MB CPUCtrl	fpga2			1.85	1.85	1.87
	DBCtrI	fpga3			1.00	1.00	1.00
	PortCtrl	fpga4			1.04	1.04	1.09
	Fsbl	fsbl			1.100	1.100	1.104
	LinuxFW	lnxfw			1.100	1.100	1.104
	ROMMONB LC1	rommon			18.16	18.16	18.24
A99-48X10GE-1G-CM	Can Bus Ctrl (CBC) LC4	cbc			47.02	47.02	47.03
	MB CPUCtrl	fpga2			1.85	1.85	1.87
	DBCtrI	fpga3			1.00	1.00	1.00
	PortCtrl	fpga4			1.04	1.04	1.09
	Fsbl	fsbl			1.100	1.100	1.104
	LinuxFW	lnxfw			1.100	1.100	1.104
	ROMMONB LC1	rommon			18.16	18.16	18.24
A9K-48X10GE-1G-CM	Can Bus Ctrl (CBC) LC4	cbc			47.02	47.02	47.03
	MB CPUCtrl	fpga2			1.85	1.85	1.87
	DBCtrI	fpga3			1.00	1.00	1.00
	PortCtrl	fpga4			1.04	1.04	1.09
	Fsbl	fsbl			1.100	1.100	1.104
	LinuxFW	lnxfw			1.100	1.100	1.104
	ROMMONB LC1	rommon			18.16	18.16	18.24
A9K-48X10GE-1G-TR	Can Bus Ctrl (CBC) LC4	cbc			47.02	47.02	47.03
	MB CPUCtrl	fpga2			1.85	1.85	1.87
	DBCtrI	fpga3			1.00	1.00	1.00
	PortCtrl	fpga4			1.04	1.04	1.09
	Fsbl	fsbl			1.100	1.100	1.104
	LinuxFW	lnxfw			1.100	1.100	1.104
	ROMMONB LC1	rommon			18.16	18.16	18.24
A9K-24X10GE-1G-SE	Can Bus Ctrl (CBC) LC4	cbc			47.02	47.02	47.03
	MB CPUCtrl	fpga2			1.85	1.85	1.87
	DBCtrI	fpga3			1.00	1.00	1.00
	PortCtrl	fpga4			1.04	1.04	1.09
	Fsbl	fsbl			1.100	1.100	1.104
	LinuxFW	lnxfw			1.100	1.100	1.104
	ROMMONB LC1	rommon			18.16	18.16	18.24
A9K-24X10GE-1G-TR	Can Bus Ctrl (CBC) LC4	cbc			47.02	47.02	47.03
	MB CPUCtrl	fpga2			1.85	1.85	1.87
	DBCtrI	fpga3			1.00	1.00	1.00
	PortCtrl	fpga4			1.04	1.04	1.09

	Fsbl	fsbl			1.100	1.100	1.104
	LinuxFW	lnxfw			1.100	1.100	1.104
	ROMMONB LC1	rommon			18.16	18.16	18.24
A9K-24X10GE-1G-CM	Can Bus Ctrl (CBC) LC4	cbc			47.02	47.02	47.03
	MB CPUCtrl	fpga2			1.85	1.85	1.87
	DBCtrl	fpga3			1.00	1.00	1.00
	PortCtrl	fpga4			1.04	1.04	1.09
	Fsbl	fsbl			1.100	1.100	1.104
	LinuxFW	lnxfw			1.100	1.100	1.104
	ROMMONB LC1	rommon			18.16	18.16	18.24
ASR9901-LC	Can Bus Ctrl (CBC)A		cbc				55.06
	Gamora-FPGA(A)						0.26
	IPU-FPGA(A)						1
	IPU-FSBL(A)						1.104
	IPU-Linux(A)						1.104
	Primary-BIOS(A)						23.13
SIPs							
A9K-SIP-500	Can Bus Ctrl (CBC) LC5	cbc	3.06	3.06	3.06	3.06	3.06
	CPUCtrl LC5	cpld1	0.15	0.15	0.15	0.15	0.15
	QFPCCPUBridge LC5	fpga2	5.14	5.14	5.14	5.14	5.14
	NPUXBarBridge LC5	fpga1	0.24	0.24	0.24	0.24	0.24
	ROMMONB LC5	rommon	1.04	1.04	1.04	1.04	1.04
A9K-SIP-700	Can Bus Ctrl (CBC) LC5	cbc	3.06	3.06	3.06	3.06	3.06
	CPUCtrl LC5	cpld1	0.15	0.15	0.15	0.15	0.15
	QFPCCPUBridge LC5	fpga2	5.14	5.14	5.14	5.14	5.14
	NPUXBarBridge LC5	fpga1	0.24	0.24	0.24	0.24	0.24
	ROMMONB LC5	rommon	1.04	1.04	1.04	1.04	1.04
A9K-SIP-700-8G	Can Bus Ctrl (CBC) LC5	cbc	3.06	3.06	3.06	3.06	3.06
	CPUCtrl LC5	cpld1	0.15	0.15	0.15	0.15	0.15
	QFPCCPUBridge LC5	fpga2	5.14	5.14	5.14	5.14	5.14
	NPUXBarBridge LC5	fpga1	0.24	0.24	0.24	0.24	0.24
	ROMMONB LC5	rommon	1.35	1.35	1.35	1.35	1.35
SPAs							
SPA-2XCHOC12/DS0	SPA FPGA2 swv1.00	fpga2	1.00	1.00	1.00	1.00	1.00
	SPA FPGA swv1.36	fpga1	1.36	1.36	1.36	1.36	1.36
	SPA ROMMON swv2.2	rommon	2.02	2.02	2.02	2.02	2.02
SPA-2XOC12-POS	SPA FPGA swv1.00	fpga1	1.00	1.00	1.00	1.00	1.00
SPA-4XOC12-POS	SPA FPGA swv1.00	fpga1	1.00	1.00	1.00	1.00	1.00
SPA-8XOC12-POS	SPA FPGA swv1.00	fpga1	1.00	1.00	1.00	1.00	1.00
SPA-1XCHOC48/DS3	SPA I/O FPGA	fpga2	1.00	1.00	1.00	1.00	1.00
	SPA I/O FPGA	fpga3	1.00	1.00	1.00	1.00	1.00
	SPA I/O FPGA	fpga1	1.36	1.36	1.36	1.36	1.36
	SPA ROMMON	rommon	2.02	2.02	2.02	2.02	2.02
SPA-1XOC3-ATM-V2	SPA FPGA swv1.2	fpga1	2.02	2.02	2.02	2.02	2.02
	SPA FPGA swv2.104 hww2	fpga2	2.10	2.10	2.104	2.104	2.104
SPA-3XOC3-ATM-V2	SPA FPGA swv1.2	fpga1	2.02	2.02	2.02	2.02	2.02
	SPA FPGA swv2.104 hww2	fpga2			2.104	2.104	2.104
SPA-1XOC48POS/RPR	SPA FPGA swv1.101 hww3	fpga2	1.10	1.10	1.101	1.101	1.101
	SPA FPGA swv1.2	fpga1			1.02	1.02	1.02
SPA-2XOC48POS/RPR	SPA FPGA swv1.00	fpga1	1.00	1.00	1	1	1
SPA-4XOC48POS/RPR	SPA FPGA swv1.00	fpga1	1.00	1.00	1	1	1
SPA-OC192POS-XFP	SPA FPGA swv1.2 hww2	fpga1	1.02	1.02	1.02	1.02	1.02
	SPA FPGA swv1.101 hww3	fpga2	1.101	1.101	1.101	1.101	1.101
SPA-4XT3/E3	SPA E3 Substrate FPGA	fpga2	1.04	1.04	1.04	1.04	1.04
	SPA T3 Substrate FPGA	fpga3	1.04	1.04	1.04	1.04	1.04
	SPA I/O FPGA	fpga1	1.01	1.01	1.01	1.01	1.01
	SPA ROMMON	rommon	2.12	2.12	2.12	2.12	2.12
SPA-2XT3/E3	SPA E3 Substrate FPGA	fpga2	1.04	1.04	1.04	1.04	1.04
	SPA T3 Substrate FPGA	fpga3	1.04	1.04	1.04	1.04	1.04
	SPA I/O FPGA	fpga1	1.01	1.01	1.01	1.01	1.01
	SPA ROMMON	rommon	2.12	2.12	2.12	2.12	2.12
SPA-2XT3/E3-V2	SPA FPGA swv1.1 hww3	fpga1	1.01	1.01	1.01	1.01	1.01
	SPA ROMMON	rommon	1.00	1.00	1	1	1
SPA-4XT3/E3-V2	SPA FPGA swv1.1 hww3	fpga1	1.01	1.01	1.01	1.01	1.01
	SPA ROMMON	rommon	1.00	1.00	1	1	1
SPA-1XCHSTM1/OC3	SPA T3 Substrate FPGA	fpga2	1.04	1.04	1.04	1.04	1.04
	SPA I/O FPGA	fpga1	1.08	1.08	1.08	1.08	1.08
	SPA ROMMON	rommon	2.12	2.12	2.12	2.12	2.12
SPA-1XCHSTM1/OC3V2	SPA I/O FPGA	fpga1	1.00	1.00	1	1	1
	SPA ROMMON	rommon	1.00	1.00	1	1	1
SPA-8XOC3-POS	SPA FPGA swv1.0	fpga1	1.00	1.00	1	1	1
SPA-4XOC3-POS-V2	SPA FPGA swv1.0	fpga1	1.00	1.00	1	1	1
SPA-4XCT3/DS0	SPA T3 Substrate FPGA	fpga2	0.11	0.11	0.11	0.11	0.11
	SPA T3 Substrate FPGA	fpga2	1.04	1.04	1.04	1.04	1.04
	SPA I/O FPGA	fpga1	2.08	2.08	2.08	2.08	2.08
	SPA ROMMON	rommon	2.12	2.12	2.12	2.12	2.12
SPA-2XCT3/DS0-V2	SPA I/O FPGA	fpga1	1.01	1.01	1.01	1.01	1.01
	SPA ROMMON	rommon	1.00	1.00	1	1	1
SPA-4XCT3/DS0-V2	SPA I/O FPGA	fpga1	1.01	1.01	1.01	1.01	1.01
	SPA ROMMON	rommon	1.00	1.00	1	1	1
SPA-8XCHT1/E1	SPA I/O FPGA	fpga1	2.08	2.08	2.08	2.08	2.08
	SPA ROMMON	rommon	2.12	2.12	2.12	2.12	2.12
SPA-8XCHT1/E1-V2	SPA I/O FPGA	fpga1	1.02	1.02	1.02	1.02	1.02
	SPA ROMMON	rommon	1.00	1.00	1	1	1
SPA-4xOC48-POS	SPA FPGA swv1.0	fpga1	1.00	1.00	1	1	1
SPA-4xOC12-POS	SPA FPGA swv1.0	fpga1	1.00	1.00	1	1	1
SPA-2xOC12-POS	SPA FPGA swv1.0	fpga1	1.00	1.00	1	1	1
SPA-1XOC12-ATM-V2	SPA FPGA swv1.2	fpga1	2.02	2.02	2.02	2.02	2.02
	SPA FPGA swv2.104 hww2	fpga2	2.104	2.104	2.104	2.104	2.104
SPA-1XOC3-ATM-V2	SPA FPGA swv2.02	fpga1	2.02	2.02	2.02	2.02	2.02
	SPA FPGA swv2.104 hww2	fpga2			2.104	2.104	2.104
SPA-3XOC3-ATM-V2	SPA FPGA swv2.104 hww2	fpga2	2.104	2.104	2.104	2.104	2.104

	SPA FPGA swv1.2	fpga1	2.02	2.02	2.02	2.02
SPA-24CHT1-CE-ATM	SPA IO FPGA	fpga1	2.32	2.32	2.32	2.32
	SPA T3 substrate FPGA	fpga2	1.10	1.10	1.1	1.1
	SPA ROMMON	rommon	1.03	1.03	1.03	1.03
SPA-2CHT3-CE-ATM	SPA FPGA SWV2.23	fpga1	2.22	2.22	2.22	2.22
	SPA T3 substrate FPGA	fpga2	1.11	1.11	1.11	1.11
	SPA ROMMON	rommon	1.04	1.04	1.04	1.04
SPA-1CHOC3-CE-ATM	SPA IO FPGA	fpga1	2.23	2.23	2.23	2.23
	SPA OC3 substrate FPGA	fpga2	2.23	2.23	2.23	2.23
	SPA ROMMON	rommon	1.04	1.04	1.04	1.04
SPA-10X1GE-V2	SPA FPGA swv1.10	fpga1	1.10	1.10	1.1	1.1
MPAs						
A9K-MPA-2x10GE	EP I/O FPGA	fpga6	1.06	1.06	1.06	1.06
A9K-MPA-4x10GE	EP I/O FPGA	fpga6	1.06	1.06	1.06	1.06
A9K-MPA-20x1GE	EP I/O FPGA	fpga3	1.00	1.00	1.01	1.01
A9K-MPA-2X40GE	EP Sage	fpga7	1.03	1.03	1.03	1.03
A9K-MPA-1X40GE	EP Sage	fpga7	1.03	1.03	1.03	1.03
A9K-MPA-8X10GE	EP I/O FPGA	fpga8	1.07	1.07	1.07	1.07
A9K-MPA-20X10GE	EP Skyquake	fpga5	1.12	1.12	1.16	1.16
A9K-MPA-2X100GE	EP Springer	fpga9	1.00	1.00	1.04	1.04
A9K-MPA-1x100GE	EP Springer	fpga9	1.00	1.00	1.04	1.04
Legend:						
'Value' = The recommended firmware version for the particular XR Release						
'X' = Not applicable or relevant to particular XR Release						
Notes:						
1. Shipped versions of ROMMON from manufacturing should supersede any previously released versions in software.						
Always use the latest version of ROMMON. Specifically, do not force downgrade ROMMON versions.						
2. All FPGA, PLD, and ROMMON versions are fully backward compatible. There is no requirement to force downgrade firmware when downgrading software.						





1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.05	1.05	1.05
1.04	1.04	1.04
4.09	4.09	4.09
0.02	0.02	0.02
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.05	1.05	1.05
5.16	5.16	5.16
25.03	25.03	25.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.05	1.05	1.05
1.04	1.04	1.04
4.09	4.09	4.09
0.02	0.02	0.02
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.05	1.05	1.05
5.16	5.16	5.16
25.03	25.03	25.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.05	1.05	1.05
1.04	1.04	1.04
4.09	4.09	4.09
0.02	0.02	0.02
1.03	1.03	1.03
1.03	1.03	1.03
1.03	1.03	1.03
1.05	1.05	1.05
5.16	5.16	5.16
34.38	34.38	34.39
1.108	1.108	1.108
0.66	0.66	0.71
1.108	1.108	1.11
0.16	0.16	0.16
0.16	0.16	0.16
0.12	0.12	0.12
0.08	0.08	0.08
10.59	10.59	10.65
34.38	34.38	34.39
1.108	1.108	1.11
0.66	0.66	0.66
1.108	1.108	1.108
0.16	0.16	0.16
0.16	0.16	0.16
0.12	0.12	0.12
0.08	0.08	0.08
10.59	10.59	10.65
35.12	35.12	35.14
1.108	1.108	1.11
0.66	0.66	0.66
1.108	1.108	1.108
0.16	0.16	0.16
0.16	0.16	0.16
0.12	0.12	0.12
0.08	0.08	0.08
14.29	14.29	14.29
35.12	35.12	35.12
1.108	1.108	1.108
0.66	0.66	0.66
1.108	1.108	1.108
0.16	0.16	0.16
0.16	0.16	0.16
0.12	0.12	0.12
0.08	0.08	0.08
14.29	14.29	14.35
16.117	16.117	16.117
1.11	1.11	1.11
4.09	4.09	4.09
0.11	0.11	0.11
0.76	0.76	0.76
43.02	43.02	43.02
0.66	0.66	0.71
0.16	0.16	0.16
0.16	0.16	0.16
0.12	0.12	0.12
0.06	0.06	0.08
1.108	1.108	1.11
1.108	1.108	1.11
16.08	16.08	16.14
43.02	43.02	43.03
0.66	0.66	0.71
0.16	0.16	0.16
0.16	0.16	0.16
0.12	0.12	0.12
0.06	0.06	0.08
1.108	1.108	1.11
1.108	1.108	1.11
16.08	16.08	16.14
50.01	50.01	50.02
1.108	1.108	1.11
0.17	0.17	0.19
1.108	1.108	1.11
0.05	0.05	0.05
0.04	0.04	0.04
0.04	0.04	0.04
1.11	1.11	1.11
17.3	17.3	17.34
50.01	50.01	50.02
1.108	1.108	1.11
0.17	0.17	0.19
1.108	1.108	1.11
0.05	0.05	0.05

0.04	0.04	0.04
0.04	0.04	0.04
1.11	1.11	1.11
17.3	17.3	17.34
54.09	54.09	54.09
0.31	0.31	0.31
2	2	2
1.104	1.104	1.104
1.104	1.104	1.104
23.15	23.15	23.15
19.112	19.112	19.112
1.03	1.03	1.03
1.01	1.01	1.01
1.07	1.07	1.07
3.03	3.03	3.03
19.112	19.112	19.112
1.03	1.03	1.03
1.01	1.01	1.01
1.07	1.07	1.07
3.03	3.03	3.03
23.114	23.114	23.114
1.18	1.18	1.18
1.01	1.01	1.01
2.1	2.1	2.1
1.06	1.06	1.06
1.02	1.02	1.02
3.04	3.04	3.04
23.114	23.114	23.114
1.18	1.18	1.18
1.01	1.01	1.01
2.1	2.1	2.1
1.06	1.06	1.06
1.02	1.02	1.02
3.04	3.04	3.04
15.104	15.104	15.104
1.01	1.01	1.01
1	1	1
1.03	1.03	1.03
3.03	3.03	3.03
15.104	15.104	15.104
1.01	1.01	1.01
1	1	1
1.03	1.03	1.03
3.03	3.03	3.03
15.104	15.104	15.104
1.01	1.01	1.01
1	1	1
1.03	1.03	1.03
3.03	3.03	3.03
15.104	15.104	15.104
1.01	1.01	1.01
1	1	1
1.03	1.03	1.03
3.03	3.03	3.03
20.118	20.118	20.118
1.04	1.04	1.04
1.05	1.05	1.05
3.03	3.03	3.03
20.118	20.118	20.118
1.04	1.04	1.04
1.05	1.05	1.05
3.03	3.03	3.03
20.118	20.118	20.118
1.04	1.04	1.04
1.05	1.05	1.05
3.03	3.03	3.03
21.111	21.111	21.111
1.03	1.03	1.03
1.08	1.08	1.08
1.05	1.05	1.05
1.04	1.04	1.04
1.04	1.04	1.04
41	41	41
3.03	3.03	3.03
21.111	21.111	21.111
1.03	1.03	1.03
1.08	1.08	1.08
1.05	1.05	1.05
1.04	1.04	1.04
1.04	1.04	1.04
41	41	41
3.03	3.03	3.03
21.111	21.111	21.111
1.03	1.03	1.03
1.08	1.08	1.08
1.05	1.05	1.05
1.04	1.04	1.04
1.04	1.04	1.04
41	41	41
3.03	3.03	3.03
21.111	21.111	21.111
1.03	1.03	1.03
1.08	1.08	1.08
1.05	1.05	1.05
1.04	1.04	1.04
1.04	1.04	1.04
41	41	41
3.03	3.03	3.03
33.05	33.05	33.05
1.26	1.26	1.26
3.07	3.07	3.07
5.08	5.08	5.08
38.23	38.23	38.23

[illegible]

1.25	1.25	1.27
1.103	1.103	1.103
1.103	1.103	1.103
8.43	8.43	8.47
39.08	39.08	39.08
1.97	1.97	1.97
1.25	1.25	1.25
1.103	1.103	1.103
1.103	1.103	1.103
8.43	8.43	8.43
39.08	39.08	39.08
1.97	1.97	1.97
1.25	1.25	1.25
1.103	1.103	1.103
1.103	1.103	1.103
8.43	8.43	8.43
39.08	39.08	39.09
1.97	1.97	1.97
1.25	1.25	1.25
1.103	1.103	1.103
1.103	1.103	1.103
8.43	8.43	8.47
42.04	42.04	42.04
1.97	1.97	1.97
1.06	1.06	1.07
1.03	1.03	1.03
1.05	1.05	1.05
3.72	3.72	3.78
49	49	49
5.23	5.23	5.52
4.4	4.4	4.4
1.103	1.103	1.103
1.103	1.103	1.103
8.43	8.43	8.47
38.23	38.23	38.23
1.97	1.97	1.97
1.07	1.07	1.07
1.09	1.09	1.09
1.16	1.16	1.16
2.02	2.02	2.02
1.103	1.103	1.103
1.103	1.103	1.103
8.43	8.43	8.47
46.06	46.06	38.23
1.85	1.85	1.97
1.02	1.02	1.07
1.02	1.02	1.09
1.10	1.10	1.103
1.10	1.10	1.103
9.23	9.23	8.47
38.23	38.23	38.23
1.97	1.97	1.97
1.07	1.07	1.07
1.09	1.09	1.09
1.09	1.09	1.09
1.16	1.16	1.16
2.02	2.02	2.02
1.103	1.103	1.103
1.103	1.103	1.103
8.43	8.43	8.47
38.23	38.23	38.23
1.97	1.97	1.97
1.07	1.07	1.07
1.09	1.09	1.09
1.16	1.16	1.16
2.02	2.02	2.02
1.103	1.103	1.103
1.103	1.103	1.103
8.43	8.43	8.47
46.06	46.06	46.06
1.85	1.85	1.88
1.02	1.02	1.02
1.02	1.02	1.02
1.1	1.1	1.112
1.1	1.1	1.112
9.23	9.23	9.27
47.03	47.03	47.03
1.87	1.87	1.88
1.00	1.00	1.00
1.1	1.1	1.1
1.104	1.104	1.111
1.104	1.104	1.111
18.24	18.24	18.27
47.03	47.03	47.03
1.87	1.87	1.88
1.00	1.00	1.00
1.1	1.1	1.1
1.104	1.104	1.111
1.104	1.104	1.111
18.24	18.24	18.27
47.03	47.03	47.03
1.87	1.87	1.88
1.00	1.00	1.00
1.1	1.1	1.1
1.104	1.104	1.111
1.104	1.104	1.111
18.24	18.24	18.27
47.03	47.03	47.03
1.87	1.87	1.88
1.00	1.00	1.00
1.1	1.1	1.1
1.104	1.104	1.111
1.104	1.104	1.111
18.24	18.24	18.27
47.03	47.03	47.03
1.87	1.87	1.88
1.00	1.00	1.00
1.1	1.1	1.1
1.104	1.104	1.111
1.104	1.104	1.111
18.24	18.24	18.27
47.03	47.03	47.03
1.87	1.87	1.88
1.00	1.00	1.00
1.1	1.1	1.1
1.104	1.104	1.111
1.104	1.104	1.111
18.24	18.24	18.27
47.03	47.03	47.03
1.87	1.87	1.88
1.00	1.00	1.00
1.1	1.1	1.1
1.104	1.104	1.111
1.104	1.104	1.111
18.24	18.24	18.27
47.03	47.03	47.03
1.87	1.87	1.88
1.00	1.00	1.0

1.104	1.104	1.111
1.104	1.104	1.111
18.24	18.24	18.27
47.03	47.03	47.03
1.87	1.87	1.88
1.00	1.00	1.00
1.1	1.1	1.1
1.104	1.104	1.111
1.104	1.104	1.111
18.24	18.24	18.27
55.06	55.06	55.06
0.26	0.26	0.26
1	1	1
1.104	1.104	1.104
1.104	1.104	1.104
23.13	23.13	23.13
3.06	3.06	3.06
0.15	0.15	0.15
5.14	5.14	5.14
0.24	0.24	0.24
1.04	1.04	1.04
3.06	3.06	3.06
0.15	0.15	0.15
5.14	5.14	5.14
0.24	0.24	0.24
1.04	1.04	1.35
3.06	3.06	3.06
0.15	0.15	0.15
5.14	5.14	5.14
0.24	0.24	0.24
1.35	1.35	1.35
1.00	1.00	1.00
1.36	1.36	1.36
2.02	2.02	2.02
1.00	1.00	1.00
1.00	1.00	1.00
1.00	1.00	1.00
1.00	1.00	1.00
1.36	1.36	1.36
2.02	2.02	2.02
2.02	2.02	2.02
2.104	2.104	2.104
2.02	2.02	2.02
2.104	2.104	2.104
1.101	1.101	1.101
1.02	1.02	1.02
1	1	1
1	1	1
1.02	1.02	1.02
1.101	1.101	1.101
1.04	1.04	1.04
1.04	1.04	1.04
1.01	1.01	1.01
2.12	2.12	1
1.04	1.04	1.04
1.04	1.04	1.04
1.01	1.01	1.01
2.12	2.12	2.12
1.01	1.01	1.01
1	1	1
1.01	1.01	1.01
1	1	1
1.04	1.04	1.04
1.08	1.08	1.08
2.12	2.12	2.12
1	1	1
1	1	1
1	1	1
1	1	1
0.11	0.11	0.11
1.04	1.04	1.04
2.08	2.08	2.08
2.12	2.12	2.12
1.01	1.01	1.01
1	1	1
1.01	1.01	1.01
1	1	1
2.08	2.08	2.08
2.12	2.12	2.12
1.02	1.02	1.02
1	1	1
1	1	1
1	1	1
1	1	1
2.02	2.02	2.02
2.104	2.104	2.104
2.02	2.02	2.02
2.104	2.104	2.104
2.104	2.104	2.104

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