

Field-Replaceable Units and Expansion Modules

This appendix lists

- All field replaceable units (FRUs) in a LightStream 2020 multiservice ATM switch (LS2020 switch)
- Expansion modules for NPs and line cards

(An expansion module includes everything needed to add a particular kind of card or module to an existing system.)

Part numbers for FRUs and expansion modules are provided in Table C-1. Part numbers for external data cables and power cords appear in the *LightStream 2020 Site Planning and Cabling Guide*. For descriptions of FRUs listed here, refer to the chapter entitled “Hardware Overview.”



Caution Before removing any components from the chassis, read the safety instructions in the chapter entitled “Hardware Troubleshooting.” You can damage the system by removing components when you are not grounded.

Table C-1 FRUs and Current Part Numbers

Component	Order Number
AC-powered base system ¹	L2020-BASE-AC
Redundant AC-powered base system ¹	L2020-BASE-AC-R
DC-powered base system ¹	L2020-BASE-DC
Redundant DC-powered base system ¹	L2020-BASE-DC-R
NP option module	L2020-NP-DC=
NP card with 32 MB memory	
NP access card and disk assembly	
NP access card	L2020-NP-A=
Disk assembly	L2020-DSK-DC=
Switch card only	L2020-SC-NOCAB=
Switch card with console/modem assembly	L2020-SWC=

Component	Order Number
Low-speed line card, V.35 module	L2020-LSC-V35-M=
Low-speed line card	
Low-speed access card	
2 V.35 fantails	
2 4-ft (1.2 m) fantail cables ²	
Low-speed line card, RS-449 module	L2020-LSC-449-M=
Low-speed line card	
Low-speed access card	
2 RS-449 fantails	
2 4-ft (1.2 m) fantail cables ²	
Low-speed line card, X.21 module	L2020-LSC-X21-M=
Low-speed line card	
Low-speed access card	
1 X.21 fantail	
2 4-ft (1.2 m) fantail cables ²	
Packet line card, Ethernet module	L2020-8E-M=
Packet line card	
Ethernet access card	
Packet line card, fiber Ethernet module	L2020-8EF-M=
Packet line card	
Fiber Ethernet access card	
Packet line card, FDDI module	L2020-2FD-M=
Packet line card	
FDDI access card	
Packet line card, Serial V.35 module	L2020-8S-v35-M=
Packet line card	
Serial access card	
2 V.35 fantails	
2 8-ft (2.4m) fantail cables ²	
Packet line card, Serial RS-449 module	L2020-8S-449-M=
Packet line card	
Serial access card	
2 RS-449 fantails	
2 4-ft (1.2 m) fantail cables ²	
Packet line card, Serial X.21 module	L2020-8S-X21-M=
Packet line card	
Serial access card	
1 X.21 fantail	
2 4-ft (1.2 m) fantail cables ²	
Packet line card, T1 circuit emulation (CEMAC) module	L2020-8T1-CE-M=
Packet line card	
T1 circuit emulation access card	
Packet line card, E1 circuit emulation (CEMAC) module	L2020-8E1-CE-M=
Packet line card	
E1 circuit emulation access card	

Component	Order Number
Packet line card, E1/BNC circuit emulation (CEMAC) module	L2020-8E1-CE-BN-M=
Packet line card	
E1 circuit emulation access card	
E1 fantail with BNC connectors	
4-ft (1.2m) fantail cable	
Packet line card, E1/SMZ circuit emulation (CEMAC) module	L2020-8E1-CE-SM-M=
Packet line card	
E1 circuit emulation access card	
E1 fantail with SMZ connectors	
4-ft (1.2m) fantail cable	
Cell line card, 1-port multimode OC-3c module	L2020-1M-OC3-M=
Cell line card (1 TSU)	
1-port multimode OC-3c access card	
Cell line card, 1-port single mode OC-3c module	L2020-1S-OC3-M=
Cell line card (1 TSU)	
1-port single mode OC-3c access card	
Cell line card, 2-port multimode OC-3c module	L2020-2M-OC3-M=
Cell line card (2 TSUs)	
2-port multimode OC-3c access card	
Cell line card, 2-port single mode OC-3c module	L2020-2S-OC3-M=
Cell line card (2 TSUs)	
2-port single mode OC-3c access card	
Cell line card, 4-port T3 module	L2020-4T3-M=
Cell line card (1 TSU)	
4-port T3 access card	
T3/E3 fantail	
4-port fantail cable bundle (4 ft (1.2m))	
Cell line card, 8-port T3 module	L2020-8T3-M=
Cell line card (2 TSUs)	
8-port T3 access card	
T3/E3 fantail	
8-port fantail cable bundle (4 ft (1.2m))	
Cell line card, 4-port E3 module	L2020-4E3-M=
Cell line card (1 TSU)	
4-port E3 access card	
T3/E3 fantail	
4-port fantail cable bundle (4 ft (1.2m))	
Cell line card, 8-port E3 module	L2020-8E3-M=
Cell line card (2 TSUs)	
8-port E3 access card (certification pending)	
T3/E3 fantail	
8-port fantail cable bundle (4 ft (1.2m))	
Midplane	L2020-MID-PL=
AC bulk power tray, Rel. 2.1 (dual)	L2020-PS-AC-D=

Component	Order Number
AC bulk power tray, Rel. 1	L2020-PS-AC=
DC bulk power tray	L2020-PS-DC=
Blower assembly	L2020-FAN=
Filler panels to cover 1 empty slot (front and rear)	L2020-FIL-1=
Filler panels to cover 5 empty slots (front and rear)	L2020-FIL-5=
Disk assembly connector: 64-pin DIN connector with spacer	L2020-64DIN=

1. A base system is a chassis with an NP, switch card, midplane, blowers, and power supply. A redundant base system has two NPs, two switch cards, midplane, blowers, and two power supplies.
2. 4-ft and 12-ft fantail cables are also available; contact your sales representative for details.