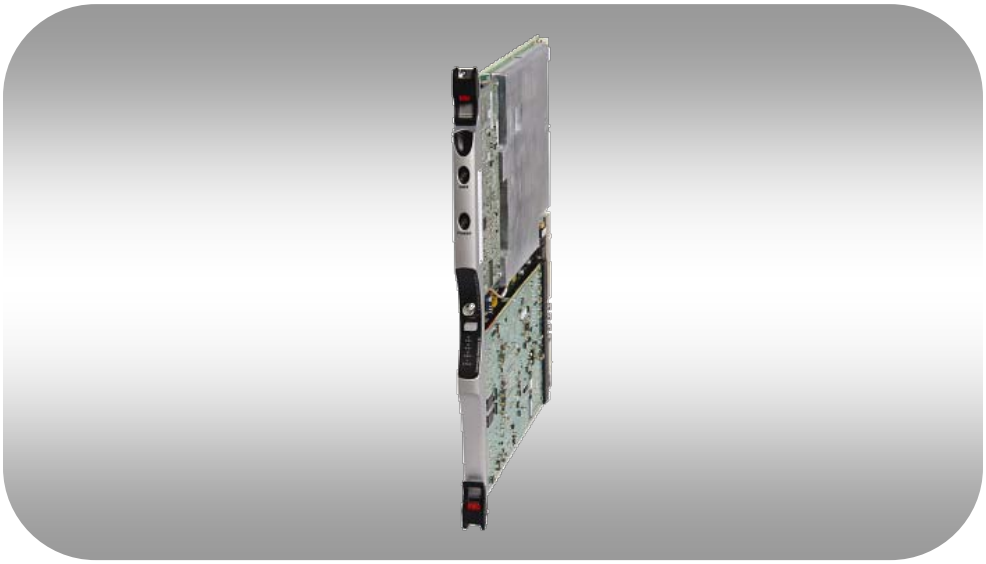
C4® CMTS

16D Cable Access Module



Features

- High density
- DOCSIS ® 3.0 downstream channel bonding
- Supported in legacy C4 CMTS chassis
- Legendary C4 CMTS hot swappable "hitless" redundancy

Application

The ARRIS C4 CMTS 16D Cable Access Module (CAM) comprises sixteen DOCSIS® or Euro-DOCSIS 3.0 downstream channels. These channels are grouped onto four upconverters with each upconverter supporting four of the sixteen channels. The Physical Interface Card (PIC) of the 16D CAM has four F-connectors with each F-connector connected to the output of one of the upconverters. Each downstream channel on the same upconverter/F-connector must have a unique center frequency, but the channels are not required to be contiguous. The four downstream channels on a single F-connector can span up to 80MHz of spectrum, allowing an MSO flexibility in choosing DOCSIS downstream frequencies.

ARRIS FlexCAM™ Technology

The C4 CMTS contains patented FlexCAM technology that provides "hitless" reliability and flexibility in the depth of protection. This includes support for multiple 16D CAM RF sparing groups, the size of which can vary from one to six active 16D CAMs. If a failure occurs on a 16D CAM with "hitless" RF sparing, all of the cable modems connected to the failed CAM are automatically assigned to the spare 16D CAM without requiring the cable modems to reregister and with minimal packet loss.

DOCSIS 3.0 Downstream Channel Bonding

The 16D CAM supports DOCSIS 3.0 downstream channel bonding with variable size bonding groups. This allows for the aggregation of two or more DOCSIS channels to support ultra high bandwidths. For example, four bonded channels provide a 160Mbps data stream to a subscriber‘s DOCSIS 3.0 cable modem.

Legacy DOCSIS 2.0, 1.1 and 1.0 Cable Modem Support

All channels on the 16D CAM can support DOCSIS 3.0 including channel bonding, DOCSIS 2.0 and 1.x modems at the same time. Further, no external timing server is required thus minimizing total system cost.

Flexible Upstream-to-Downstream Channel Mapping

Each downstream channel on the 16D CAM can be associated with any upstream channel on a 12U CAM in the chassis. This allows the operator to "right size" the upstream-to-downstream ratio for each service group. This flexibility reduces capital costs as less channels will sit idle compared to a system with a fixed upstream-to-downstream ratio.

Supported in Existing C4 CMTS Chassis

The 16D CAM protects the operator's investment as it is supported in all previously deployed C4 CMTS Chassis when paired with the Router Control Module (RCM) and 2Dx12U CAM.

ARRIS C4 CMTS 16D Cable Access Module

Specifications

RF Downstream:	Center Frequency Range (MHz)	91-860 (DOCSIS 3.0) 112-860 (Euro-DOCSIS 3.0)
	Modulation (QAM)	256
	Data Rate (Mbps) (max.)	30.34 to 55.62 per channel
	RF Output Level (dBmV)	44 to 60
	Typical Modulation Error Ratio (MER) (dB)	47
	Symbol Rate (Msym/sec)	5.361 (DOCSIS) 6.952 (Euro-DOCSIS)
	Bandwidth (MHz)	6 (DOCSIS); 8 (Euro-DOCSIS)
	Output (load) impedance (ohms)	75
Physical:	Power	-48 VDC (-44 to -72 VDC)
	Power Consumption	140 W max at -48VDC
	Operating Temperature:	
	Short Term °F (°C)	+23 to +131 (-5 to +55)
	Long Term °F (°C)	+41 to +104 (+5 to +40)
	Storage Temperature °F (°C)	-40 to 158 (-40 to +70)
	Operating Humidity (Min.-Max.)	5-85% (Non condensing)
	Dimensions (HxWxD) in. (cm)	24.5 x 17.4 x 20.0 (64.6 x 44.2 x 50.8)
	Weight lbs (kg)	approx 4 (1.8)
Support with C4 System Software Release 7.0:	CIDR (Classless Inter-Domain Routing) (RFC 1519) Command Line Interface (CLI) DHCP Relay Agent (with Option 82) DOCSIS 3.0 (Bronze Qualified in CableLabs® CW56) DOCSIS MIBs and Cadant® enterprise MIBs DOCSIS Set-top Gateway (DSG) Dynamic Cable Modem Load Balancing Extended ACLs & Named ACLs Flexible US to DS Mapping ICMP (RFC 792) Interface Bundling across any number of RF interfaces IP DiffServ PacketCable Multimedia PacketCable™ 1.0/1.1 PIM-SSM, IGMPv2, and multicast flows (RFC1112) RIPv2 (RFC 1723), OSPFv2 (RFC 2328) SNMP v1, v2c and v3 Telnet	

Ordering Information

Part #	Description
722014	16D Cable Access Module (CAM) DOCSIS 3.0
722016	16D CAM Physical Interface Card (PIC) – Active Slot position
722017	16D CAM Physical Interface Card (PIC) – Spare Slot position

22 September 2008
ARRIS-C4-CMTS-16D-CAM-D-080917

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