

Application

The Cadant 2Dx12U Cable Access Module (CAM) provides two RF downstream channels and twelve RF upstream channels with two integrated upconverters for the ARRIS Cadant C4™ Cable Modem Termination System (CMTS). The Cadant C4 CMTS is a high-performance, next-generation carrier-class CMTS for advanced IP services. The Cadant C4 CMTS supports up to sixteen CAMs in the 21 slot system chassis. The Cadant C4 CMTS with the Cadant 2Dx12U CAM is DOCSIS® 2.0 qualified and Euro-DOCSIS 2.0 ready.

FlexCAM™ Technology

The Cadant C4 CMTS contains patented FlexCAM™ technology that provides superior reliability and flexibility. This includes support for multiple flexible RF sparing groups. With “hitless” RF sparing, if a failure occurs on a DOCSIS CAM module, all the cable modems connected to the failed CAM are immediately switched to the spare CAM in the sparing group. For “hitless” sparing, up to seven active modules are supported in a sparing group while up to 15 CAMs are supported per sparing group with basic CAM sparing. The Cadant C4 CMTS continues to lead the industry with multiple and flexible sparing groups that allow an operator to “mix and match” sparing groups of various sizes in the same Cadant C4 CMTS chassis. In this way, operators can engineer particular nodes for system availability based on the traffic classification of planned services. For example, an operator may choose to deploy 7+1 redundancy for voice services, 1+1 redundancy for business class services, and other redundancy ratios for residential data services.

Flexible Mapping

The Cadant 2Dx12U CAM also supports flexible upstream-to-port and upstream-to-downstream mapping. The upstream-to-downstream mapping provides the ability to map any number of the 12 upstreams to either of the downstreams. The result is that operators have a number of options available for system configuration (e.g., 1:4 & 1:8, 1:6 & 1:6, 1:11 & 1:1, etc.) which provides greater flexibility to meet different DS:US ratios that many new advanced services such as telephony, peer-to-peer applications including gaming and commercial services require.

The Cadant 2Dx12U CAM also supports flexible upstream port mapping. This allows any number of the 12 upstream channels to be assigned to any of the eight physical RF ports with affecting other subscribers already receiving service. This enables virtual node splits that help to reduce or even eliminate physical wiring changes normally associated with node splits.

Ingress Cancellation

Ingress noise cancellation and the spread spectrum characteristics of S-CDMA, provide critical performance improvements by increasing the immunity of the upstream carriers to ingress noise. The 2Dx12U has demonstrated that it is capable of handling noise sources above 0 dBc in power. Additionally, cancellation of as many as 16 different ingress sources has been successfully demonstrated.

Spectral Monitoring

The Cadant 2Dx12U CAM provides an all-digital RF front end. The entire available spectrum (5-42 MHz, 5-55 MHz or 5-65 MHz) is digitized on each of the CAM's eight upstream physical ports. By using digital signal processing techniques, the Cadant C4 CMTS can report upstream signal-to-noise ratio (SNR) with increased accuracy and on a per-cable modem basis.

- **High density**
- **Flexible upstream mapping**
- **Symmetric services and improved upstream performance using advanced DOCSIS 2.0 capabilities**



Specifications

RF	Frequency Range (MHz)	91-857 (DOCSIS); 100-860 (Euro-DOCSIS)
Downstream:	Modulation (QAM)	64, 256
	Data Rate (Mbps) (max.)	30 to 55.6
	RF Output Level (dBmV)	45 to 61
	Typical Modulation Error Rate (MER) (db)	47
	Symbol Rates	5.057 Msym/sec (64 QAM) 5.361 Msym/sec (256 QAM)
	Bandwidth (MHz)	6 (DOCSIS); 8 (Euro-DOCSIS)
RF Upstream:	Output (load) impedance (ohms)	75
	Frequency Range (MHz)	5-42 (DOCSIS 2.0); 5-55; 5-65 (Euro-DOCSIS 2.0)
	Modulation	QPSK, 8, 16, 32, 64 QAM
	RF Output Level (dBmV)	-16 to +29
	Bit rate range per channel (Mbps)	0.32 to 30.72
	Input impedance (ohms)	75
Physical:	Operating Temperature °F (°C)	32 - 122 (0-40)
	Storage Temperature °F (°C)	-4 to 167 (-20 to 70)
	Operating Humidity (min – max)	5 - 95% (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)

**Cadant 2Dx12U CAM Ordering
Codes & Descriptions**

#710423 2Dx12U Cable Access Module (CAM)

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