



Features

- Seamless program splicing and switching
- Variable number of programs per output
- Configurable minimum and maximum bit rates per program
- Configurable relative recoding priorities between programs
- Digital ad insertion (optional)
- PID filtering and remapping
- PCR dejittering and restamping
- PAT and PMT computation and insertion
- DVB-ASI aggregation
- SI and PSI processing
- ATSC (PSIP) aggregation
- Statistical multiplex pools
- Data insertion
- Synchronization of data and video
- CBR to VBR conversion
- VBR to CBR conversion
- Bit rate conversion CBR to CBR, VBR to VBR
- SD/HD rate shaping



The DM 6400, part of Motorola's CherryPicker line of digital video Application Platforms, delivers unparalleled quality and reliability for networking, distributing, and processing both standard-definition (SD) and high-definition (HD) services. It offers a wide array of digital video applications, including grooming of custom channel lineups, rate shaping and statistical remultiplexing, localized digital ad insertion, and Graphic overlay and SqueezeBack.

Technology Foundation

The DM 6400 is a compact (1 RU) chassis with five slots for custom input/output options. This flexible hardware architecture allows operators to add application-specific modules as their business requirements grow.

At the heart of the DM 6400 are custom-designed ASICs, powering the most efficient and highest quality SD and HD rate shaping available. Designed from the ground up to address the unique computational requirements of MPEG-2 digital video, this powerful ASIC solution enables the DM 6400 to handle an unsurpassed number of simultaneous digital video stream processes.

Digital Ad Insertion over IP Networks

Moving from ASI to IP-based distribution networks is an integral step in the transition to all-digital networks. To maintain ad revenues during this transition, operators also need to shift DPI to an

IP-distribution network. The DM 6400 allows operators to insert local and national digital ads over IP networks, facilitating a more efficient process for digital insertion.

Graphic overlay and SqueezeBack

A powerful new DSP card (optional) now supports Motion and Static Graphic Overlays and SqueezeBack using internal and external sources via SDI (Serial Digital Interface) Key and Fill Video.

Across ASI and GigE Networks

With the DM 6400, operators can continue to use today's DVB-ASI networks while providing a scalable platform that supports a phased transition to a GigE video network. As operators move from ASI to GigE, the ability to mirror outputs allows them to process each transport only once and output it twice, removing the cost of duplicate processing of the same input.



Distributed Chassis

The innovative Distributed Chassis™ architecture enables operators to remotely operate and monitor DM 6400s distributed throughout their network. Using an IP network switching fabric, Distributed Chassis allows operators to process and distribute digital video services from any input to any output across all of the DM 6400s in a GigE network.

The DM 6400 is easy to configure and control using a simple Web-based point-and-click graphical user interface. The entire distributed network of DM 6400s can be remotely configured and controlled from the same Master Control Management Console.

Interoperability

The DM 6400 is fully interoperable with all MPEG-2– and MPEG-4 AVC-compliant equipment from leading cable industry manufacturers. Third-party SNMP and XML applications can be used to seamlessly configure, manage, and monitor a DM 6400 network.

Management Message Insertion

The SCTE 30 to 35 conversion feature available on every DM 6400 gives operators more flexibility in managing cues and digital messages used to insert digital content. Operators can create splice-ready streams at the master headend by combining pre-existing digital content with SCTE 35 management messages sent to the DM. The streams can then be distributed through network divisional rings in a more efficient way, and operators can seamlessly insert localized digital content at regional hubs.

Keeping Services On-Air

The DM 6400 offers program and input redundancy within a single chassis for keeping services on-air. Additionally, removable data flash cards store identity and configuration information for each individual chassis, and can be transferred directly to a backup chassis as part of a fail-safe environment.

SPECIFICATION SHEET

CherryPicker® Application Platform
DM 6400

INPUT/OUTPUT

Inputs per Chassis	Up to 19 DVB-ASI
Video Streams Rate-Shaped	64 max. (SD), 16 max. (HD)
Interface Formats	GigE, DVB-ASI, DHEI
Data Coding	MPEG-2, MPEG-4 ACV (DVB, DCII, ATSC), SPTS, MPTS
Video Formats	MPEG-2 MP@ML, MP@HL (HD) MPEG-4 AVC up to level 4 (ad insertion only)
Frame Rates	25, 29.97, 30, 59.94, 60 Hz 3:2 pulldown (film)
Aspect Ratios	4:3 and 16:9
Audio Formats	Dolby® AC-3 and Musicam
Input Data Rate	200 Mbps per ASI port
Aggregate Output per Chassis	
Rate-Shaped/Spliced Programs	Up to 160 Mbps
GigE Content Aggregation	900 Mbps
Bit Rates of Individual Programs	0.2 to 20 Mbps (CBR or VBR)

INPUT PREPROCESSING MODULE FOR RESOLUTION CHANGE

Input Ports	Four DVB-ASI
Input Horizontal Resolutions	528, 544, 704, 720 lines
Output Horizontal Resolutions	352, 480, 528, 544, 704 lines
Eight independent DSPs each process a single SD stream	
Vertical resolution unchanged up to 576 lines	

GIGABIT ETHERNET INPUT/OUTPUT MODULE

Input/Output Ports	Two
Data Rate per Port	1 Gbps input/output
SPTS or MPTS per Port	Up to 128 UDP streams
Physical Interface	1000Base-CX/SX/LX
Connectors	Two electrical/copper RJ-45, 2 optical LC-SFP (optional)
Quality of Service (QoS)	802.1p, 802.1q
Unicast, multicast, ARP, ICMP, and IGMP support over UDP/IP	
Multimode (short haul), Singlemode (long haul)	
Optical transceivers (optional)	
GigE port mirroring	

CONTROL

Ethernet (10/100Base-T)	Web access for integrated controller and GUI, XML and SNMP for external service managers, SCTE 35 cue processing and forwarding, API SCTE 30 for ad servers, remote system monitoring
RS232	Remote system monitoring, dial-in system monitoring through included modem
Contact Closures	Two GPI monitoring controls, two alarm outputs
Front-panel keypad and LCD	Configuration and monitoring, system and program status

ELECTRICAL/MECHANICAL

Form Factor	1 RU, 19 in-rack-mountable 20" L x 17.25" W x 1.75" H (excluding rack ears and connectors)
Input Voltage	100 to 240 VAC, -48 VDC (optional)
Frequency	50 to 60 Hz
Power Consumption	2.9 A VAC, 2.7 A VDC (optional)
Operating Temperature	0 °C to 50 °C
Side Cooling	Right to left
Humidity	5 to 95%, non-condensing
Safety Certification	UL, CUL, TUV
Emissions Certification	FCC Class A, CE

All features, functionality, and other product specifications are subject to change without notice or obligation.



Rear view