

taking satellite tracking and
monitoring to a new level

Isat M2M

the successor to the Inmarsat D+ service
with significant enhancements in power
usage and end to end speed



by utilising the IsatM2M system, Satamatics' solution will bring a number of important benefits to the customer:

faster message delivery, lower latency

Higher forward data rates and shorter frame lengths allow more efficient message delivery. Commands can be sent to a terminal and a response received in under a minute. This is a great advantage to mission critical applications as responsive actions can be achieved in a much shorter timescale.

impressive power saving

A significant improvement has been made to the control channel information. Start up to first transmission from sleep mode has reduced to less than 60 seconds. A new power control protocol can cut terminal power consumption by a factor of up to 64. These features result in longer battery life, or for the same life span, allow smaller, lower cost batteries to be used. In either case this will reduce the cost of the complete solution.

enhanced quality of service

Enhancements have been built into the service allowing terminals to automatically select the most suitable return data rate / burst length for its location. This will significantly improve the performance of the service in poor coverage areas or on the edge of satellite footprints.

simple upgrade

New terminals will be delivered with IsatM2M and D+ firmware installed. The terminal will automatically use IsatM2M where available, switching to D+ where it is not. All existing SAT-101 and SAT-201 terminals can be upgraded to use IsatM2M by a firmware update. Satamatics will continue to provide a D+ service to the legacy terminals for the foreseeable future.

benefits to business

Overall these improvements will have a positive effect on users businesses; enhancing communication and response times, allowing greater control of valuable assets, greatly increasing the field life of remote units and providing more cost effective solutions.

comparison data

Forward channel	D+	IsatM2M
Frame Length	2 minutes	30 seconds
Acquisition time from power on	~3 minutes	~20 seconds
Typical message delivery time to terminals	~3 minutes	~45 seconds
Effective receive power consumption	600mW	10mW
Return channel	D+	IsatM2M
Burst length	2s or 8s (fixed)	2s, 4, or 8s (dynamically and automatically selected)
User bits per burst	84 bits	84 bits or 204 bits
Time to first transmission (from terminal, from power on)	~5 minutes	~44 seconds
Round trip (poll-response)	D+	IsatM2M
	~5 minutes	under 1 minute



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