



## IP Products

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### CAT-iq Dongle



# CAT-iq

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CAT-iq stands for Cordless Advanced Technology – internet and quality. The CAT-iq standard supports new and exciting consumer products for wireless home communication and entertainment:

- **Brilliant and natural voice quality**

CAT-iq telephony applications are connected to the broadband networks, enabling a revolution in voice quality. The new devices will for example provide speakerphones with a design and feature set matching the function of expensive conference systems but without the association of higher costs. CAT-iq enables cordless telephony applications with voice quality as natural as possible. CAT-iq is the only technology worldwide that supports wireless music and audio applications. The new technology is able to access the internet, to support streaming audio applications and coverage of the whole house with a guaranteed quality of services.

- **Innovative unlimited features**

CAT-iq also offers connectivity to the emerging IMS network (Integrated Multimedia Subsystem) for cordless phones and other portable devices. With this capability CAT-iq phones are able to access yellow pages and other public phone books worldwide. And even more CAT-iq provides universal interfaces to the Internet and IMS applications and is also provides compatibility for the new emerging Web 2.0 applications.



# CAT-iq

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- **Home Gateways**

Suppliers of the next stage of Home Gateways are already implementing CAT-iq into the next generation of Home Gateways. This development is also driven by Operators and Service Providers, who demand strong interoperability between products of different suppliers. Therefore CAT-iq gives consideration to a certification program to ensure interoperability of communication services up to the application layer.

Certification means that certified test bodies examine the interoperability of products. The CAT-iq logo guarantees that products passed these certification tests and give certainty to consumers that they interoperate with each other. The CAT-iq technology standard and certification has been designed with the Operator's needs in mind.

- **Based on worldwide DECT standard**

CAT-iq is based on the regulative rules of the mature and reliable DECT standard where frequencies are available worldwide and regulative rules are established. The DECT technology, the predecessor of CAT-iq with more than 200 Million devices in the market worldwide, is one of 5 radio access technologies for the 3rd generation network (IMT-2000). CAT-iq offers a guaranteed quality of service because CAT-iq operates exclusively in it's own frequency band.



# CAT-iq

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- **Technology waves**

The CAT-iq technology offers a bouquet of profiles (“profile model”) and will be introduced in waves. The first wave of products will be available mid of 2007. The following profiles of applications are planned until 2009:

Wideband Voice (basic interoperability): Cost effective cordless phone with basic telephony services and a minimum set of supplementary services.

Internet Data and Audio Streaming: Products which are suited to directly access the internet and provide applications such as audio streaming in real-time to enjoy the variety of worldwide Internet radio offerings.

Wideband Voice (extended interoperability): Features cordless telephony applications with a wider range of supplementary services.

Intelligent Networking: Provides auto-configuration and self-administration to make the products easy to install and handle by customers.

“The new technology standard CAT-iq makes use of the fast spreading distribution of global broadband networks and provides a new era of inhouse wireless communication and entertainment products. Consumers, manufacturers and service providers will benefit from cost-effective CAT-iq products which offer interoperability, ease-of-use and groundbreaking new broadband applications and features”, says Erich Kamperschroer, Chairman of the DECT Forum.



# CAT-iq DECT



- Certified with the new generation of ETSI standards known as CAT-iq
- WBA (using long slot)
- Data and audio streaming
- Greater interoperability across a greater range of features



Suncorp and Siemens successfully Interop in August '07

“Building on the results of the previous Interoperability event, the DECT Forum has successfully concluded the first phase of its Interoperability program, with the identification of two golden platforms, enabling the commencement of the formal certification program”.

“The devices which will provide full support for the certification program are identified as the platforms from Siemens and Suncorp”.



# CAT-iq DECT Dongle/Module



## *Concept*

- Ship VoIP when the customer signs up
- Internal or external to the Hub/GW
- No need to fully integrate VoIP into Hub/GW and the issues around implementation and regression testing
- Separately upgradeable to the Hub/GW
- With or without SIP engine on board
- CAT-iq is at the heart of the products
- CAT-iq certified gives range of handsets
- Suncorp will work with Hub supplier to implement
- TR069/111/104 ready
- Simple addition to enable registration of DECT products to work directly from the Hub/GW
- Builds on the success of our current technology.
- No additional PSU as unit draws power from the Hub/GW
- Added Procurement flexibility



# CAT-iq DECT Dongle/Module

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## *SIP Engine*

- Strategic decisions:
  - SIP powered by the Hub/GWOR
  - SIP removed from Hub/GW and is a plug in option, making a lower cost and less complex Hub

This means:

- Dongle/Daughter board will:
  - Have no SIP interaction and will be an RF path only, but full upgradeableOR
  - Have a full implementation of SIP and be the Voice Gateway

There are whole system cost implications



# CAT-iq DECT Dongle/Module



	<i>Internal Module</i>	<i>External Dongle</i>
<i>SIP on-Board</i>	Small PCB directly connected to the Hub main PCB via either I2C, SPI or MII. Complete with SIP, TR069 and CAT-iq/DECT RF.	Credit card size unit. Complete unit with SIP, TR069 and CAT-iq/DECT RF. Connection to Hub will be engineered for cost, security and ease of implementation.
<i>RF only</i>	Smaller PCB directly connected to the Hub main PCB via either I2C, SPI or MII. SIP engine supported by the Hub main PCB and the module adds CAT-iq/DECT RF and TR069 support.	Credit card size unit. Complete unit with CAT-iq/DECT RF and TR069 support. Connection to Hub will be engineered for cost, security and ease of implementation.



## How will it work?

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- CAT-iq certified and is core to our strategy
- Suncorp will work with Hub/GW suppliers to implement
- SIP on or off the units
- Hub/GW supplies the QoS
- Hub/GW supplies the power, no need for an additional PSU
- Quick time to market

# Option 1: External Dongle

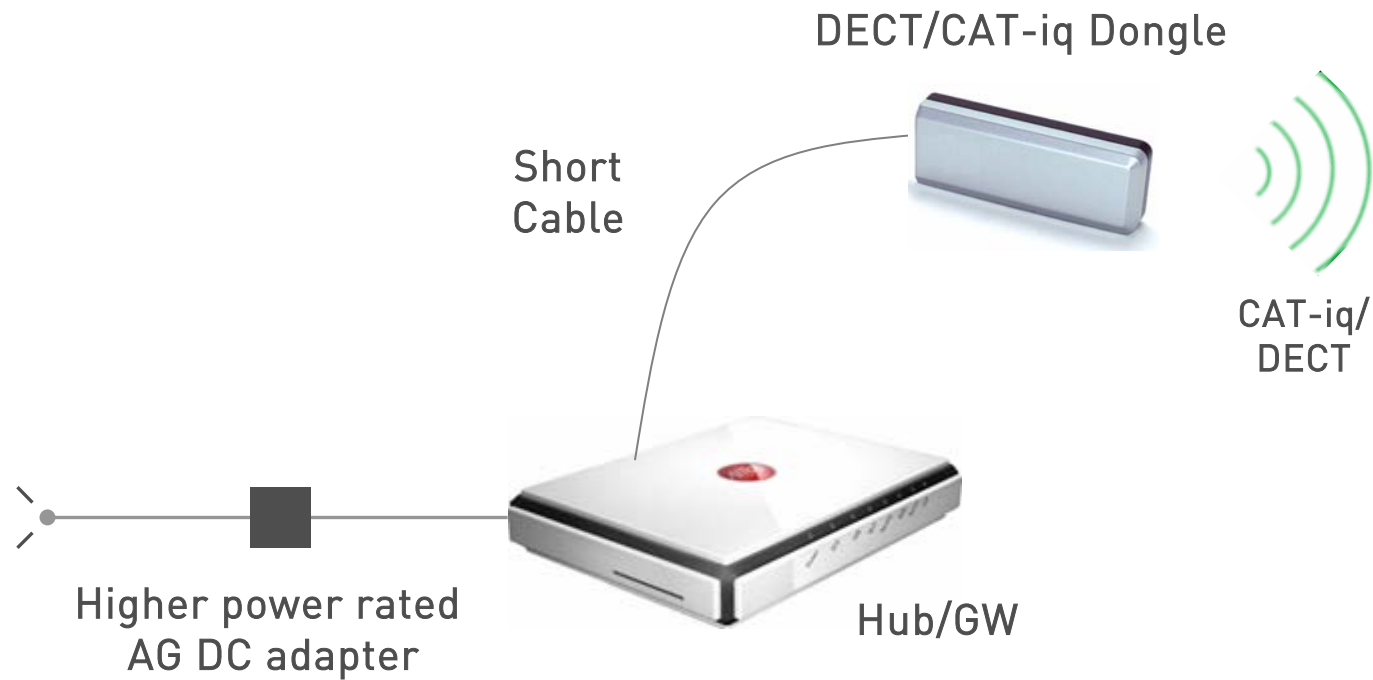
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- CAT-iq certified
- Dongle using current proven technology
- TR069/111/104 compliant
- SIP on or off Dongle
- Easy to maintain - as components, Hub and DECT upgrade separately this limits regression testing and risk
- No extra PSU, powered by Hub/GW
- Short lead to move the Dongle away from the Hub 'noise' and any potential RF ghosting



# External Dongle configuration



## Option 2: Integrated in Hub/GW

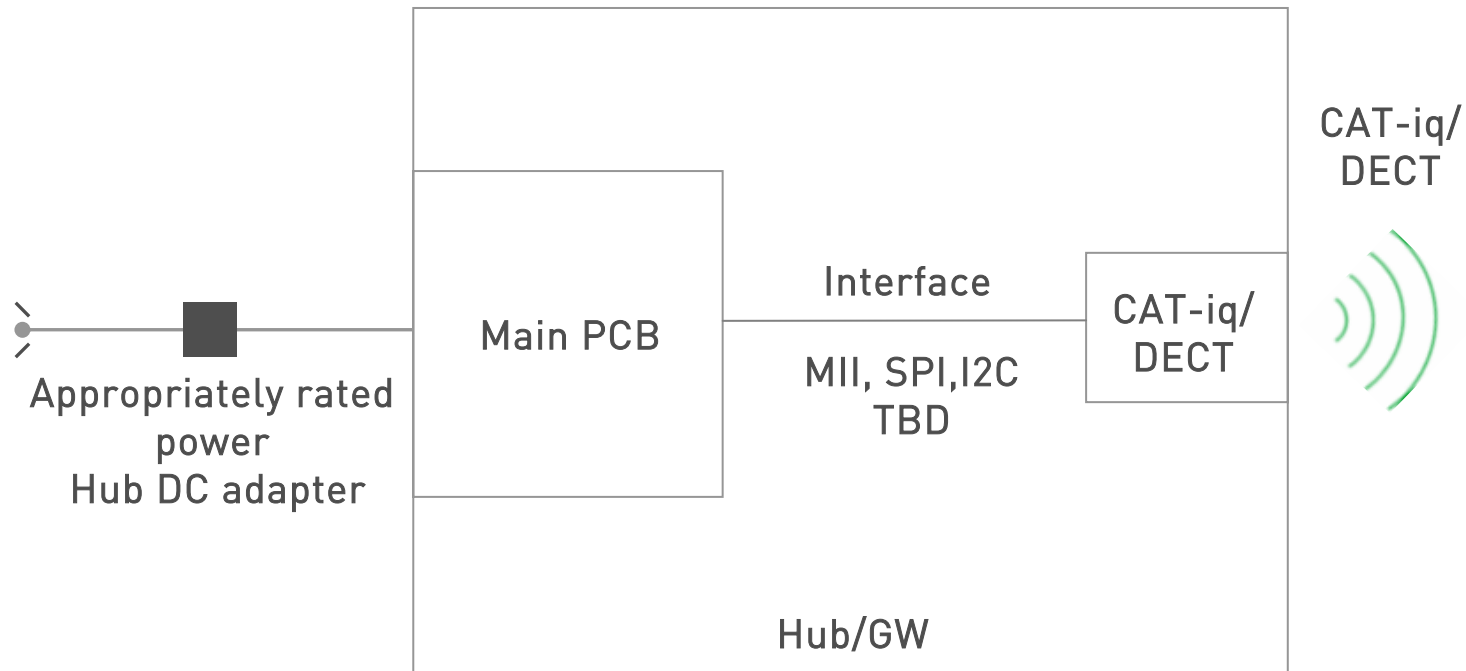
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- CAT-iq certified
- Daughter board using current proven technology
- TR069/111/104 compliant
- SIP on or off daughter board
- Easy to maintain - as components, Hub/GW and DECT upgrade separately this limits regression testing and risk
- No extra PSU



# Internal Daughter-board configuration



**Suncorp**

**Suncorp..... your CAT-iq supplier**

