# Dataeagle Product Family

**A short despriction:**


**DATAEAGLE 1000**:

For cable replacement. Transparent transmission of information over the air. For example for RS232 or RS485.

**DATAEAGLE 2000**:

This is a multi-interface radio coupler, functionally similar to a DP/DP- or DP/PN-coupler. You have radios with different optional interface modules, for example IOs, serial, DP, relays, MPI, Profinet and so on. You can communicate information from these different interfaces over a common memory area on one radio network.

**DATAEAGLE 3000: our best seller**

Profibus wireless, up to 1,5 Mbit. Transparent for Step7 as you do not need to project it.
These modules use Bluetooth, with Frequency Hopping and patented “filter technology”.
Competitors:
**Siemens** uses wireless which is generally speaking not well suited for cyclic fieldbus communications. For example WiFi only offers three parallel channels in the 2,4 GHz band while Bluetooth offers 80. Moreover Bluetooth Frequency Hopping avoids collisions and Bluetooth covers longer distance.
**Phoenix** uses Bluetooth too, but without filter technology. Cyclic communication requires lots of information be transferred at fast speed in order to get the Slaves answers to the PLC. Phoenix transports the Profibus telegrams as they are over the radio link. In order to make this work they need to slow speed down to 187,5 Kbit (DATAEAGLE does 1,5 Mbit) and additionally need to change Profibus bus parameters away from standard (DATAEAGLE uses Profibus standard config).
**DATAEAGLE Filter Technology** is patented and comprises several communications strategies in order to improve Profibus radio performance. Main technologies behind this are filtering and time-out parameterization. Filtering means that our modules screen Profibus telegrams and only transmit new information over the radio. If a telegram has no new content it will not burden the radio link. But the modules will answer to the PLC respectively the slaves as if it had communicated over the radio link, thus keeping both PLC and slaves happy and working.

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Time-out parameterization refers to the fact that you can configure your DATAEAGLE modules to continue answering for a defined time to the PLC and the slaves respectively even when the radio link is interrupted. Small interruptions on a radio link are the most usual thing and competitors systems will produce a PLC Bus Failure, often even a STOP, every time a small radio interruption occurs. This can lead to a much diminished availability of the machine/installation even if the interruptions are only in the millisecond range. DATAEAGLE keeps systems running, even in harsh environments because small interruptions of the radio are “filtered”. This enables you to use DATAEAGLE radio links even in safety critical applications using **Profisafe** profile. Our higher price tag than Phoenix is justified because our system solves problems Phoenix cannot solve, it is not a comparable product.

**DATAEAGLE 4000**:

Very similar to DATAEAGLE 3000, but for Profinet.

DATAEAGLE 4000 also offers patented filtering technology and time-out parameterization and enables Profisafe applications.

Despite our patented communication strategies also improve Profinet wireless, our advantage over the competitors is smaller as Profinet is generally faster and therefore technologies without filtering and time-out-parameterization work better than they did with Profibus.

Anyhow, doing **Profisafe** is again reserved to us.

Pricing is adapted to this situation, standard DATAEAGLE 4710/13/15 are a lot less expensive than the corresponding Profibus modules. Our higher price tag is on DATAEAGLE 4712 which also offers Profisafe. Others can’t do this, this justifies our higher price.

**DATAEAGLE 6000**:

Wireless for CAN-Bus. We have still little experience on this issue, have only done few applications. Are researching and developing a communications strategy that will give us a leading edge.

**DATAEAGLE 7000**:

Our IoT modules

Pricing may be higher than simple “GSM Data Loggers” but these are not comparable products. There might be applications that could be done with DATAEAGLE where a Data Logger for 300 bucks is sufficient, but this is not the kind of app we are catering for.

An IoT solution not only requires a device to take the SIM card and log data into the cloud, it also requires something in the cloud to receive and process the data. Do the competitors you see have a complete solution?

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Our USPs for DE7000 family:

- Global connectivity at unified rate, anywhere on the globe always in the best network
- Data buffering and pre-processing on the module
- Outputs on the module allow for connecting actors, not only reading sensor data
- SMS and Email alarm management
- Low energy sleep mode allows deployment and wake-up years later via SMS, no cost until data is transferred
- No running cost, fees only on transferred data
- Ready to use server platform with lots of biz intelligence designed in, for example:
    - visualization for browsers
    - data base
    - communication interface to other systems
    - SIM card management and invoicing
    - Module and sensor configuration OTA
    - Module and sensor update OTA

Resuming the options and their biz cases:

**DE7000 plug&play**:

Different modules with different interfaces and housing options, including battery driven and IP68. Usage in combination with an account on our DATAEAGLE server. Enables you to connect sensors and start working with data in the cloud within days. Low cost for software and server but a little higher cost for hardware. Limitations to what the existing hardware provides in terms of interfaces and software functions on the server. You earn money on the hardware, on certain services like configurations on the server and an overhead on data traffic.

**DE7000 development kit:**

Your client can get a communication board with our SIM and processor and design it into his own products. Available interfaces are defined by client's proprietary electronics design. Client can use an account on our server or we can install the software on the clients own IT infrastructure with his CI and the adaptions he may require. In this case the software is a lot more expensive but the hardware price drops to low two-digits.
You earn money on hardware (a lot less), on the software (a lot more) and an overhead on data traffic (that is where the biz lies).
In order to facilitate fast development of prototypes instead of making an entirely new electronics we offer eval-boards with certain interfaces, example Ethernet. With this approach a client serious about starting his IoT-project can start logging data into the cloud within two to four weeks.



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