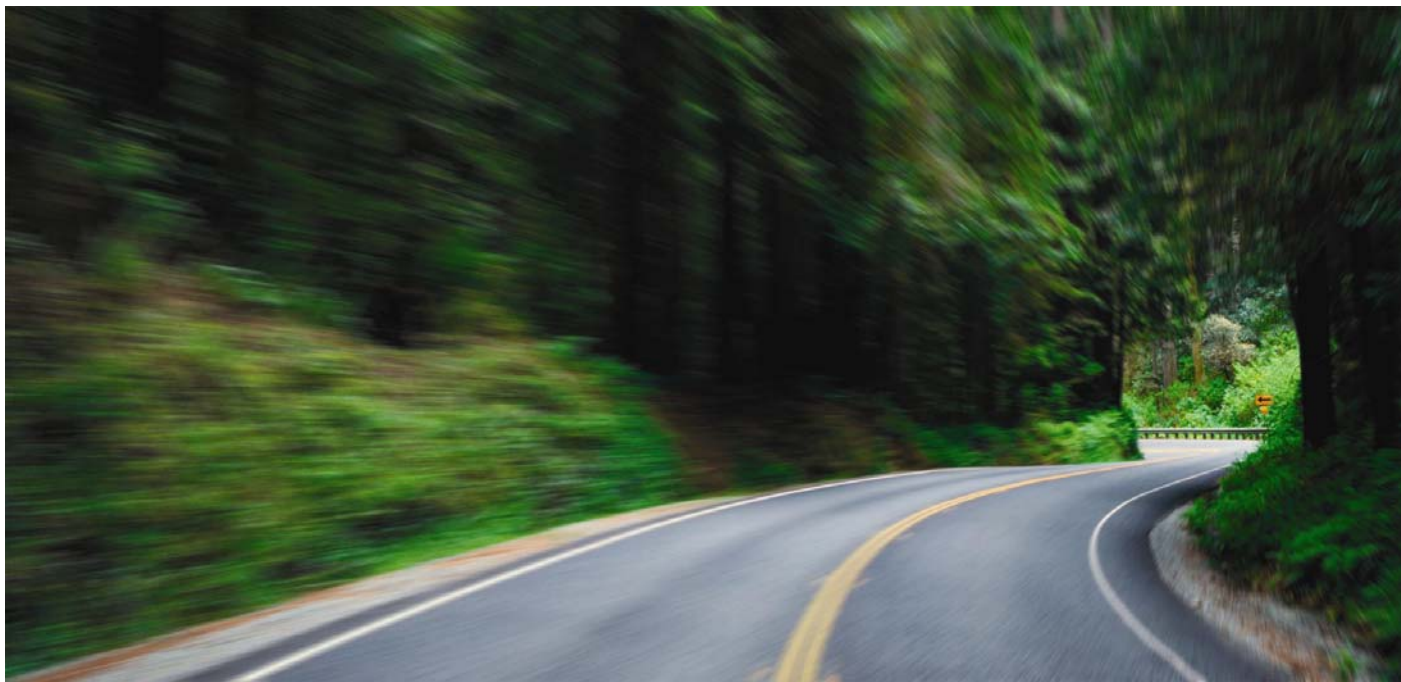


Excel Tune

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Digital Adrenaline For Your...
BMW M5 E34 3.6



Powerchip technology enhances your BMW to its ultimate level, delivering faster, smoother acceleration in all driving conditions. Whether you enjoy a leisurely weekend cruise or a hard racetrack drive – there is no easier and more effective way to release the potential from your M5 E34 3.6.

The following information is an overview of the performance the Powerchip will deliver. If you have any questions, we will assist you as best as possible. We look forward to giving you the best performance possible from your BMW.

Make	BMW
Model	M5 E34 3.6
Engine	S38
Year	Sep 90 to May 93
Powerchip Code	BMW0075



Power

In standard form the BMW M5 E34 3.6 produces 232 kw at the flywheel, and Powerchip improves the engine power to 262 kw.

Power (kw)			
Standard	Bronze/ Silver	Gold	Gold 98
232	N/A	257	262

The extra performance achieved by the Powerchip allows your vehicle to respond much better than stock M5 E34 3.6s. You will notice an effortless push back into the driver's seat, to give you a much more enjoyable and at times safer driving experience. The Powerchip will tap into your BMW's 'hidden reserves', to give you an immediately noticeable improvement from your vehicle – we guarantee it!

Torque

Torque is a measurement of your engine's pulling power, and it is torque that pulls you up hills, allowing your engine a more linear and aggressive acceleration curve. With the Powerchip, you notice the increase in torque right throughout the rev range, which gives you far greater flexibility at low engine revolutions. Towing will become less demanding, and you will no longer feel the need to take the engine to the redline in each gear to get the performance you demand... It's always there for you, when you really need it most!

Torque (Nm)			
Standard	Bronze/ Silver	Gold	Gold 98
360	N/A	406	414



Acceleration

Increased Power and Torque results in faster acceleration. And it is not just standing start acceleration that is improved, your in-gear acceleration is as well.

If overtaking is important to you, you will feel safe knowing that you spend less time on the "wrong side of the road", improving the safety of your car, for you and your family or passengers.

Perhaps you feel that you need that extra bit of power when you are lined up at the "traffic light grand prix" against another car with similar (or more) power? If you want to have the unfair advantage that will give you more 'GO' away from the lights, you need a Powerchip performance software upgrade for your M5 E34 3.6.

Fitting Details

Your car uses a plug-in plug-out chip. Fitting is easy and the Powerchip can be installed in about 30 minutes with basic skills and equipment. To install the upgrade software, simply locate the computer and un-plug the standard chip. Place the Powerchip performance upgrade into the socket and fitting is complete.

On Road Development

Where Powerchip really shines out over its competitors is the emphasis and time spent refining the program for drivability and enjoyment. Much more a 'real world' gain than full throttle horse power runs on a dyno, part throttle refinement is a gain everyone uses every time they drive the vehicle. Flat spots and poor off the line performance are smoothed out in this process, and transient throttle conditions are made razor sharp for the ultimate in response. Real time changes to tables like throttle response and power enrichment are done on road to fine tune the driving experience of the vehicle, with acceleration timing equipment used to ensure consistent and measurable gains in part throttle drivability.



Drivability

Powerchip technicians do not spend their whole research and development focus tuning the full throttle performance of each vehicle. A significant emphasis is placed on the part throttle performance. We understand that driving in everyday conditions is more than just flat out acceleration, with your foot flat to the floor.

With Powerchip performance software, your car will perform to its potential, even when you are not demanding the peak performance. You no longer need to mash the throttle to take off briskly, and in-gear overtaking can be performed without needing to change down gears.

One of the main benefits of choosing to enhance your vehicle with the Powerchip is the improvement you will feel in all driving situations, no matter what your driving style is...



Manufacturers Tolerances

BMW unfortunately leaves large tolerances in the performance characteristics of its entire fleet to allow for drivers that are negligent on maintenance, and who are non-enthusiasts. The M5 E34 3.6 is 'de-tuned' to be able to run on the poorest grade of fuel that the car is likely to encounter anywhere in the world, and also to allow for the small percentage of owners who put their cars reliability to the test due to their lack of mechanical understanding. In most cases, our clients are enthusiasts who place more emphasis on the performance characteristics of their vehicle, and therefore the Powerchip does not need to be programmed as conservatively as the stock software.

Detectability

The dealer tool is able to detect upgraded software, if they were to 'go looking' for it, however it does not interrupt the operation of the scan tool

Modified Spark Advance

In the old days the ignition distributor controlled the engine spark timing. Changes to the position in the distributor will result in changed ignition settings, and is a good method of 'tune-up' for older vehicles. Modern engine ignition is controlled by a series of tables or maps. These maps give the engine any instructions required to operate, under ALL load and rev per minute access points.

Similar to the old systems, advancing the point of ignition within a cylinder results in increased power and torque. It is important not to advance the timing beyond the capabilities of the fuel used, or else detonation can occur. Peak kilowatts are achieved when ignition timing is set as close to the point of detonation as possible, without exceeding it. This is the primary purpose for asking the octane rating each client uses most frequently, so that the software is set to the correct level of ignition advance for the fuel used.



The end result of ignition advance changes is increased power and torque, resulting in better acceleration and various other driving benefits.

Octane ratings

The Powerchip is designed to get the best from your engine, and to do this it is recommended that you use a high performance fuel. When ordering your Powerchip upgrade, we will ask you for the octane rating you would like your program to run. The advantage of using better fuels can be explained in further detail by your consultant.

Powerchip Gold is designed to run on fuel with an octane rating of 95 (Premium Unleaded, Caltex Vortex, Ampol Gold). Powerchip Gold 98 is designed to run on fuel with an octane rating of 98 or higher (Shell Optimax, BP Ultimate, Mobil Synergy 8000). We highly recommend that you use the highest-octane fuel available to you.



Our Satisfaction Guarantee

Every Powerchip sold in Australia comes with an unconditional 14-day money back guarantee*. This ensures that the Powerchip will live up to your expectations, not ours! If for any reason you are unsatisfied with the Powerchip, you may return the Powerchip to your place of purchase for a full refund of the purchase price (not including shipping and handling, installation and removal etc.).

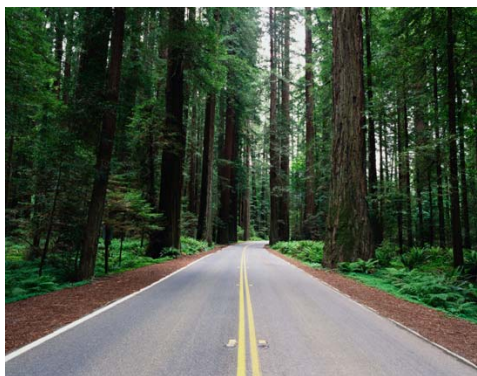
Our satisfaction guarantee* offers you total peace of mind, and makes the purchase of the Powerchip risk free. By purchasing a Powerchip you have nothing to lose – and everything to gain!

* Valid for purchases from March 11th 2005 until December 31st 2005

Warranty

All Powerchip upgrades come with a three-year, unlimited kilometer warranty, which means that if anything occurs to the Powerchip in that time, we will replace it without charge to you. An optional extended Powerchip warranty is also available at an additional \$190 at the time of ordering. This extends the warranty period on any Powerchip to six years.

If your car is covered by a new or dealer warranty, the dealer may not 'void' a warranty simply because you have fitted an aftermarket product. The fitment of the Powerchip will not have a detrimental effect on your vehicle performance or engine longevity, and therefore does not interfere with the manufacturers warranty in any way.



The terms and conditions of the Powerchip warranties can be viewed in detail on our web site at

<http://www.powerchipgroup.com/products/warranty.asp>

Value for a Lifetime

The investment you make in the Powerchip will last for as long as you keep your car, and for most of our customers, that is normally for 3 or 4 years. So when you consider the benefits of the chip over a number of years, it is not a lot to pay for extra performance you will probably use nearly every day. As a percentage of the total cost of your car, the Powerchip works out to be very cost effective. Also, with the Powerchip, you can expect your car to command a higher price when it comes time to sell!

Cost Effectiveness

As we all know, modifying late model vehicles is not a cheap exercise, however, when you look at it on a kw per dollar basis, the Powerchip comes in ahead of any other modification you could make to your BMW. Have a look at just how well the Powerchip stacks up:

Price	\$1690
kw Gain	30 kw
Price/kw	\$56.33

The Powerchip is designed to offer excellent value for money compared with other modifications you might be planning in the future.



Cost AUD(\$)				
	Bronze	Silver	Gold	Gold98
Price (Inc GST, freight additional)	N/A	N/A	\$1690	\$1690



Contact Details

If you have any further questions or would like additional information, please contact us on (03) 9311 3345 (phone), (03) 9311 1254 (fax), by email at service@exceltune.com.au or by postal mail at 5/184 Duke Street, Sunshine, Victoria, 3020. Alternatively, visit our website at www.exceltune.com.au.

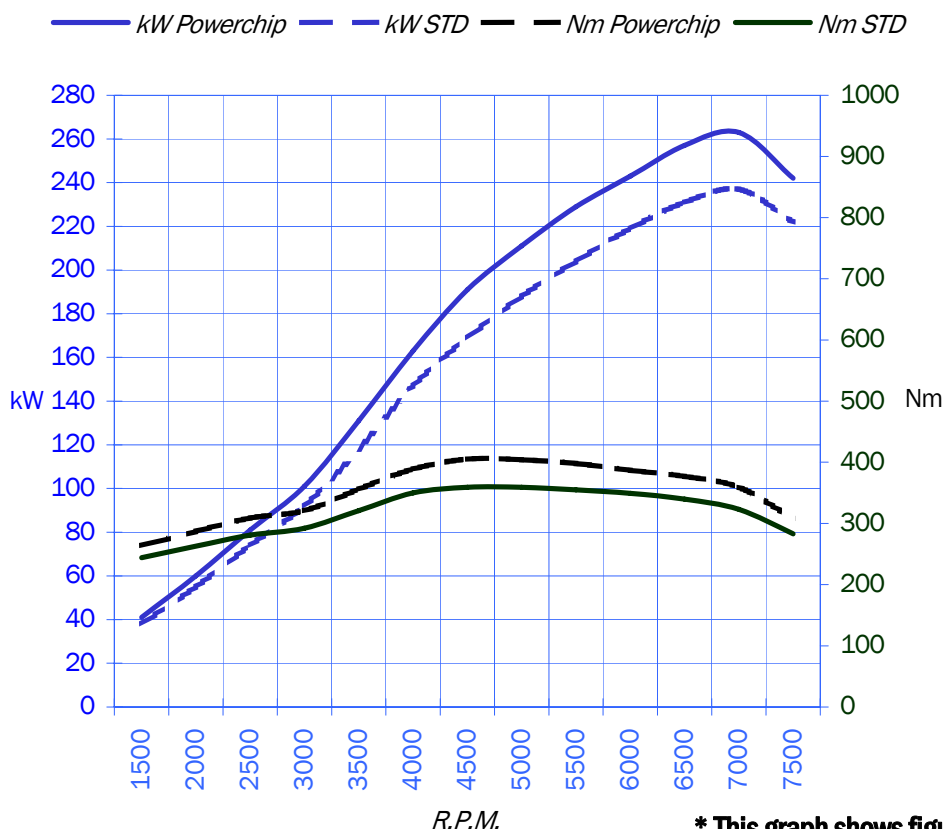
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Gold Performance Data for your...

BMW M5 E34 3.6 *

R.P.M.	kW STD	kW Powerchip	kW Gain	Nm STD	Nm Powerchip	Nm Gain
1500	38	41	3	244	264	20
2000	55	60	5	263	287	24
2500	74	81	7	281	309	28
3000	92	101	9	292	321	29
3500	118	131	13	321	356	35
4000	147	163	16	350	389	39
4500	169	191	22	359	405	46
5000	188	211	23	359	404	45
5500	204	229	25	355	398	43
6000	219	243	24	349	387	38
6500	231	257	26	340	377	37
7000	237	263	26	323	359	36
7500	222	242	20	283	308	25



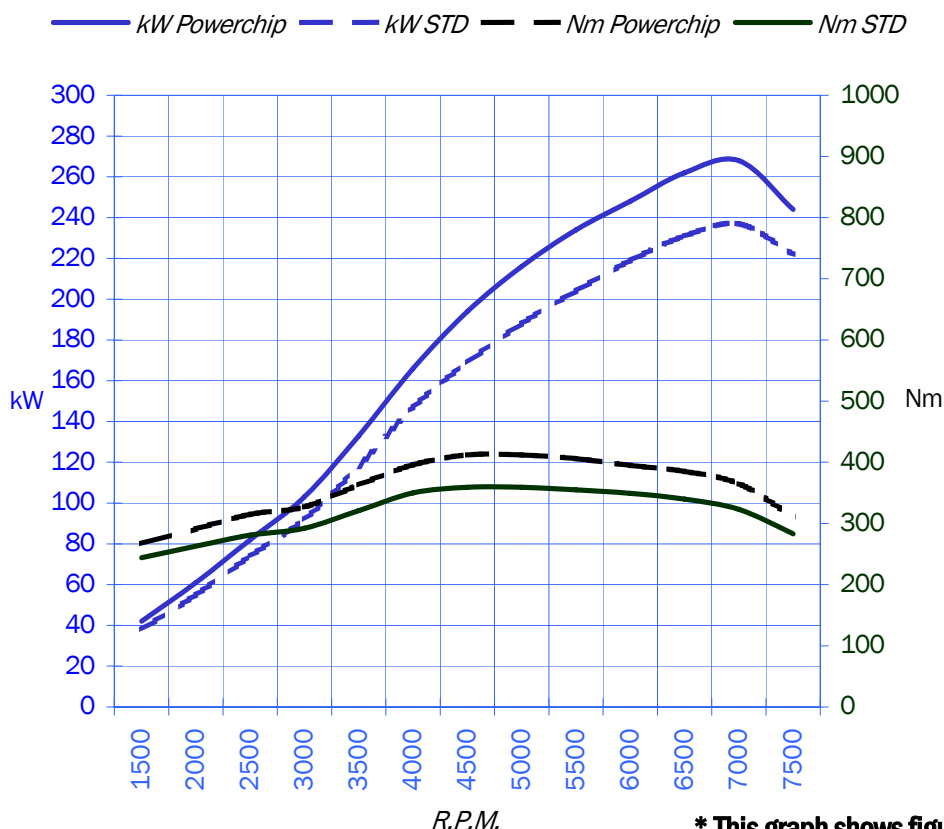
* This graph shows figures
Powerchip Gold

MODEL	ENGINE	VERSION	CAPACITY	Max kW	Max Nm	0-100 Auto	0-100 Man
M5 E34 3.6	S38	Standard	3535cc	232	360	N/A	N/A
M5 E34 3.6	S38	Gold	3535cc	257	406	N/A	N/A

Gold 98 Performance Data for your...

BMW M5 E34 3.6 *

R.P.M.	kW STD	kW Powerchip	kW Gain	Nm STD	Nm Powerchip	Nm Gain
1500	38	42	4	244	267	23
2000	55	61	6	263	291	28
2500	74	82	8	281	315	34
3000	92	103	11	292	327	35
3500	118	133	15	321	363	42
4000	147	166	19	350	396	46
4500	169	194	25	359	412	53
5000	188	216	28	359	412	53
5500	204	234	30	355	406	51
6000	219	248	29	349	395	46
6500	231	262	31	340	385	45
7000	237	268	31	323	365	42
7500	222	244	22	283	311	28



* This graph shows figures
Powerchip Gold 98

MODEL	ENGINE	VERSION	CAPACITY	Max kW	Max Nm	0-100 Auto	0-100 Man
M5 E34 3.6	S38	Standard	3535cc	232	360	N/A	N/A
M5 E34 3.6	S38	Gold 98	3535cc	262	414	N/A	N/A

Customer Testimonials

Customer Name: Dr. Harris P,

Car: M5 E34 3.6

Testimonial added: Apr 1 1998

Customer Comments:

"The power with the Powerchip fitted has increased the M5's power, particularly noticeable when overtaking on country roads. Acceleration is now slightly quicker. It is now far easier to drive very slowly (car parks, traffic jams etc.), and easier to smoothly downchange gears. The fuel economy has not changed noticeably from standard. Fitting the Powerchip gave definite improvement."

Customer Name: Steven C, Wantirna Sth

Car: 318i E46 1.9

Testimonial added: Dec 31 2001

Customer Comments:

"Having purchased my BMW 318i earlier this year I was impressed with the car although a little disappointed with its performance. As I am on the road most of the day I felt the car lacked power when I needed it most. I was on the verge of looking at new cars when I heard about Powerchip, early investigation via their web site wet my appetite to look into what they offered a little further. The rest is history, the difference in performance is remarkable I feel the money I spent on the Powerchip product is worth every cent. I have no hesitation in recommending their service and product."

"

Customer Name: Dennis B, Winston Hills

Car: 323i E46 2.5

Testimonial added: Feb 24 2003

Customer Comments:

"The Powerchip has helped the car go harder through the gears and accelerate quicker. Fifth gear is more usable now. Although it is only a modest increase in power and torque, it makes the car rev out easier (necessary for a heavy 2.5 litre car)."

Customer Name: Jeff W, Pennant Hills

Car: 323i E46 2.5

Testimonial added: May 5 2003

Customer Comments:

"Wow... I'm certainly impressed! I was little sceptical that I would see any noticeable improvement in power, particularly as I have an auto - but after driving away I started to realise that I was going to really enjoy the new experience."

Now the car is definitely more responsive, smoother and packs a punch off the lights and up hills... I would have never believed my 2.5 litre normally aspirated 6 cylinder, would be able to pull away from my brothers 5.7 litre G3 Holden Commodore - Now he's going to get his car chipped."

Excellent, prompt service with a 3 year warranty (at best, I was expecting 12 months)."

Trust me, it's value for money and I highly recommend Powerchip."

Thanks again."

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